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PARIS DAISIES OR MARGUERITES.

PAINTED FOR
JAMES VICK
SEEDSMAN



FEBRUARY, 1887.

LOW PRICES for products is the complaint that now comes from all parts of the country from those engaged in horticultural pursuits. This complaint is most earnest from the fruit-growers, although it is not unheard proceeding from other departments of horticulture, such as the commercial flower-growers, and those engaged in raising flowering plants. Since the consumption of these articles is now greater than ever before, and the nominal cost of labor is but little greater, it is evident that their production has reached that point where it is in excess of the demand. This is emphatically true of fruit-growing, and it is not a state of things wholly unforeseen or unanticipated, but the continued and steady growth of the population of the country has been relied upon to offset the great increase in horticultural products during the last twenty years. Plainly enough the capacity of the country, to use fruit supplies especially, has been over-estimated; and this is quite as true in regard to one article, that of Apples, for which a great foreign demand has grown up, as to any of the others. Although we have inclement seasons, numerous depredating insects and fungous parasites to contend with, and as yet unsuccessfully, still, in favorable seasons, we have Apple crops so plentiful that they bring but little more than the cost of handling. Now, this is a fruit

that can be kept for months, that will bear long shipments, that is in constant use in cooking as well as being consumed in a fresh state, and that has a regular place in our export trade, and if it is already raised in quantities equaling or exceeding the demand what would be the condition of Apple growing if we could overcome the insect and fungous tribes that are now imimical to this fruit! The fact is, that, notwithstanding all the difficulties we have to contend with, this is a great fruit-producing country. Statistics show that for the last thirty odd years the number of bushels of grain raised in proportion to each individual of the population has steadily increased. If the facts in regard to fruit raising could be similarly formulated they would undoubtedly show a like result. In the case of the Apple we have been able to dispose of a small per centage of the increase by foreign trade, and we have, also, with this, and with other kinds of fruits, accustomed ourselves to use and enjoy them more freely and with great advantage to health. That fruit as an article of diet will be increasingly used as our population advances in intelligence, and the opportunity is afforded, there is no doubt, but if a fruit, like the Apple, which requires from ten to fifteen years to bring the trees into bearing, and which has so many qualities in favor of its finding a ready market, can be pro-

duced in over-abundance, how much more easily shall be produced in excess those fruits that are more quickly raised, and which, from their perishable nature, must be consumed in a short time after their maturity!

These suggestions naturally suggest caution in the further extension of the fruit industries, although the present production will undoubtedly adjust itself to the demand. One course is now plain for those who would merit and be assured of the highest success in fruit-growing—that is, to produce fruit of the best quality, not that only of the best varieties, but that which has been the best grown on soils well adapted to it and properly fertilized and cultivated. One would not think of rearing thorough-bred animals in a careless manner, and the fruit-grower who has planted the choicest varieties of fruits must seek to produce crops of the highest quality.

MINA LOBATA.

One of the novelties in flowers sent out this season, is an annual of climbing habit, bearing the name of *Mina lobata*. Its introduction to the trade at this time is due

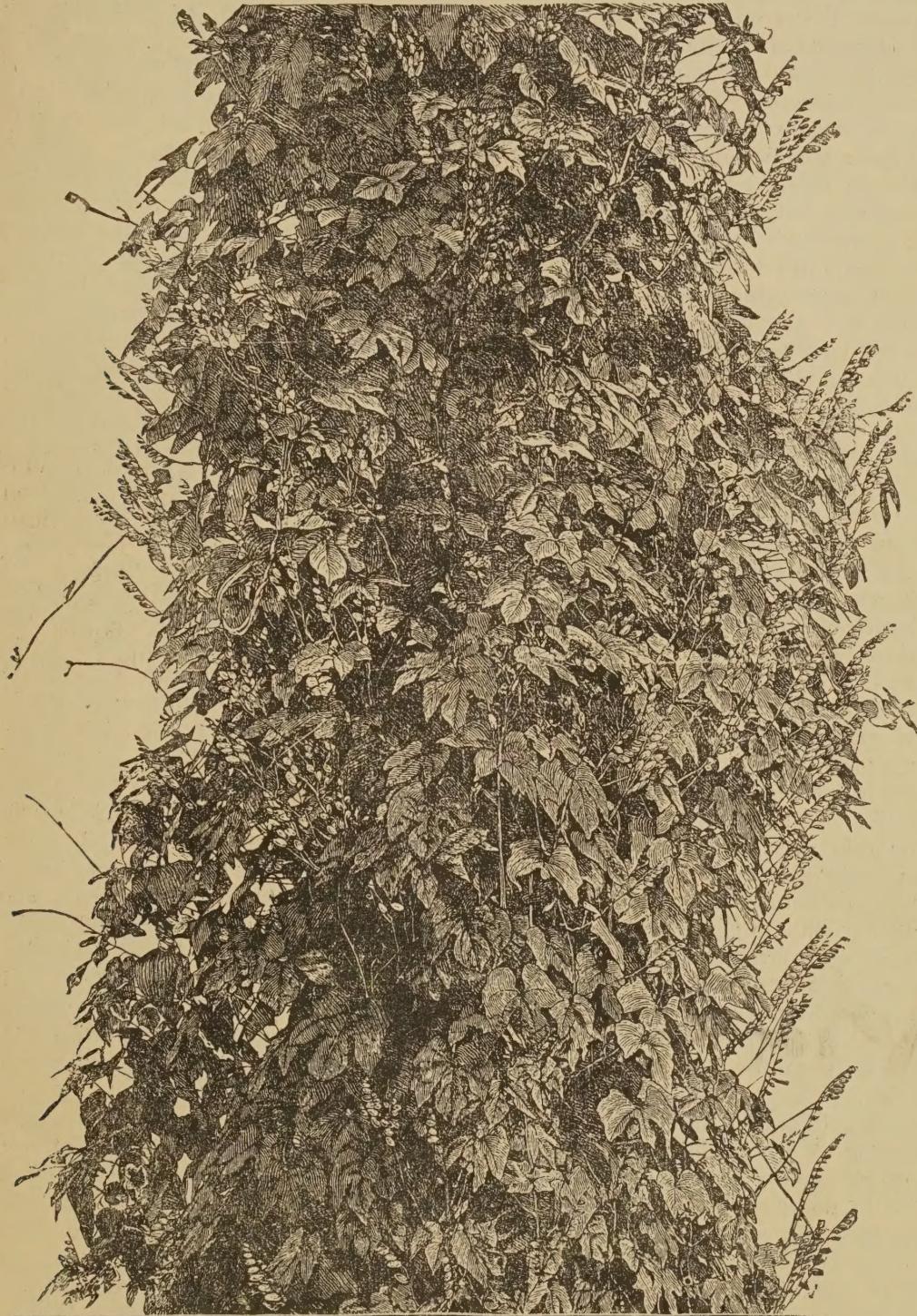
to the seedsmen, HAAGE AND SCHMIDT, of Erfurt, Germany, who give an account of it in the following words: "This really magnificent and most attractive climbing plant has been admired by all visitors of our establishment during the whole summer. The genus *Mina* (named after Don FRANCISCO XAVIER MINA, a Mexican minister,) is closely allied to *Ipomoea* and resembles in growth and its three-lobed foliage the several species of this family, but totally different are the flowers as concerns their form and their lovely colors. The flowers appear on fork-like racemes, bearing themselves upright or almost erect out of the dense and luxuriant foliage, and present thus with their bright colors an extraordinary striking aspect; the flowers are, as buds, at first bright red, but change through orange-yellow to yellowish white when in full bloom. Another interesting and most singular feature of this plant is, that it retains the racemes developed at first during the whole flowering season; the buds growing successively at the tops of the racemes, while the lower flowers after blooming for a considerable time fade, bearing thus continually clusters of flowers from the bottom up to the highest vine of the plant. The oldest racemes attained a length of fifteen to eighteen inches by the end of September and produced thirty to forty individual flowers each, of which were six to ten in full bloom or in colored buds at one time. The tube-like flowers are borne unilaterally and almost horizontally on the upright racemes and measure when fully developed three-quarters of an inch in length while the up-

permost colored bud is only one-eighth of an inch long. This plant proved to be a very rapid growing climber under our cultivation. The seeds were sown in March,



MINA LOBATA—FLOWERING STEM.

and the seedlings cultivated in pots until the middle of May, when they were planted out in the open ground and at the beginning of August had formed pyramids over eighteen feet in height well furnished with green luxuriant foliage and profusely



MINA LOBATA—PART OF PLANT FROM PHOTOGRAPH, REDUCED.

covered with flowers, as will be seen by the annexed illustration which shows a part of one pyramid reduced from a photograph. It thrives well on sunny situations and is well suited for covering arbors, trellises, etc., on account of its rapid growth and great dimensions."

SOME NEW FRUITS.

Among new varieties of fruit that are prominent in the trade the present season is the Golden Queen Raspberry. This variety originated on the grounds of EZRA STOKES, of Berlin, N. J., and is supposed to be a seedling of the Cuthbert. It would appear from the claims made for it by those interested in introducing it, that it has some unusual merits, for, while it is said to have "proved of iron-clad hardiness," and thus is suited to the coldest of northern climates, it also finds favor in our Southern States, where, heretofore, only the Black Caps have succeeded well, the heat being too great for the red varieties—"flattering reports of it have been received" from Maine and Minnesota to Florida, Louisiana and Texas. Greater popularity than this could not be hoped for. The berries are said to be of large size, exceeding those of the Cuthbert, and of high quality, golden yellow in color. The canes are strong and exceedingly productive. The fruit was sent, the past season, to the Philadelphia and Newark markets, and sold quickly at two or three cents a cup more than the Cuthbert. Mr. THEODORE F. BAKER, formerly President of the New Jersey Horticultural Society, says: "I am much pleased to state that the favorable impressions I had of it last year are confirmed and strengthened by my observations this year. It certainly is a most wonderful plant. Strong, thrifty and healthy, while, withal, the canes had drooped with their enormous crop of fruit which is large in size. Some berries I measured were one inch across, while many would cover seven-eighths of an inch in diameter. As to the quality, I consider them the best of all the Raspberries. The crate I ordered for my market sold readily and were pronounced superior to other kinds in the market, both for quality and size. The berries were in good condition, convincing me that they will bear transportation with the best of the Raspberries."

The Monmouth Strawberry, which originated in Monmouth County, New Jersey, is claimed to be an improvement on the Crescent seedling, being larger, earlier, and firmer than that variety, and with a perfect blossom. Plant equally as productive as the last named sort, and

stronger in growth. If all this is true, the Monmouth will soon take a high rank.

The Jessie Strawberry is the result of fifteen years work in cross-fertilizing, testing and selecting by F. W. LOUDON, of Janesville, Wis. It is a staminate variety, a seedling of the Sharpless, originated in 1880, and has fruited for five seasons. According to Mr. LOUDON, the plant is a stout, luxuriant grower, foliage light green, large and clean, with never a trace of rust. The berry is very large, continuing large to the last picking, with very few small berries. It is of beautiful color, fine quality, good form; colors even, with no white tips; quite firm, having been shipped six hundred miles in good condition. It is well recommended by several prominent cultivators. It is introduced to the trade by C. A. GREEN, who sent out the James Vick variety.

The Mammoth Strawberry, originated by WILLIAM DAVIS, of New Jersey, is claimed to be "the largest berry ever put upon the market." It was awarded a first prize at the Strawberry Fair held last June, at Moorestown, New Jersey. "Eleven to twelve berries fill a quart." A variety of this character may be desirable for the private garden, but it is of doubtful value for market.

Lida is a pistillate variety highly mentioned for its productiveness, large size, bright color, firmness and good quality.

Ontario is a new variety resembling in form the Cumberland Triumph; plant vigorous and productive. The fruit is said to be large and of excellent quality.

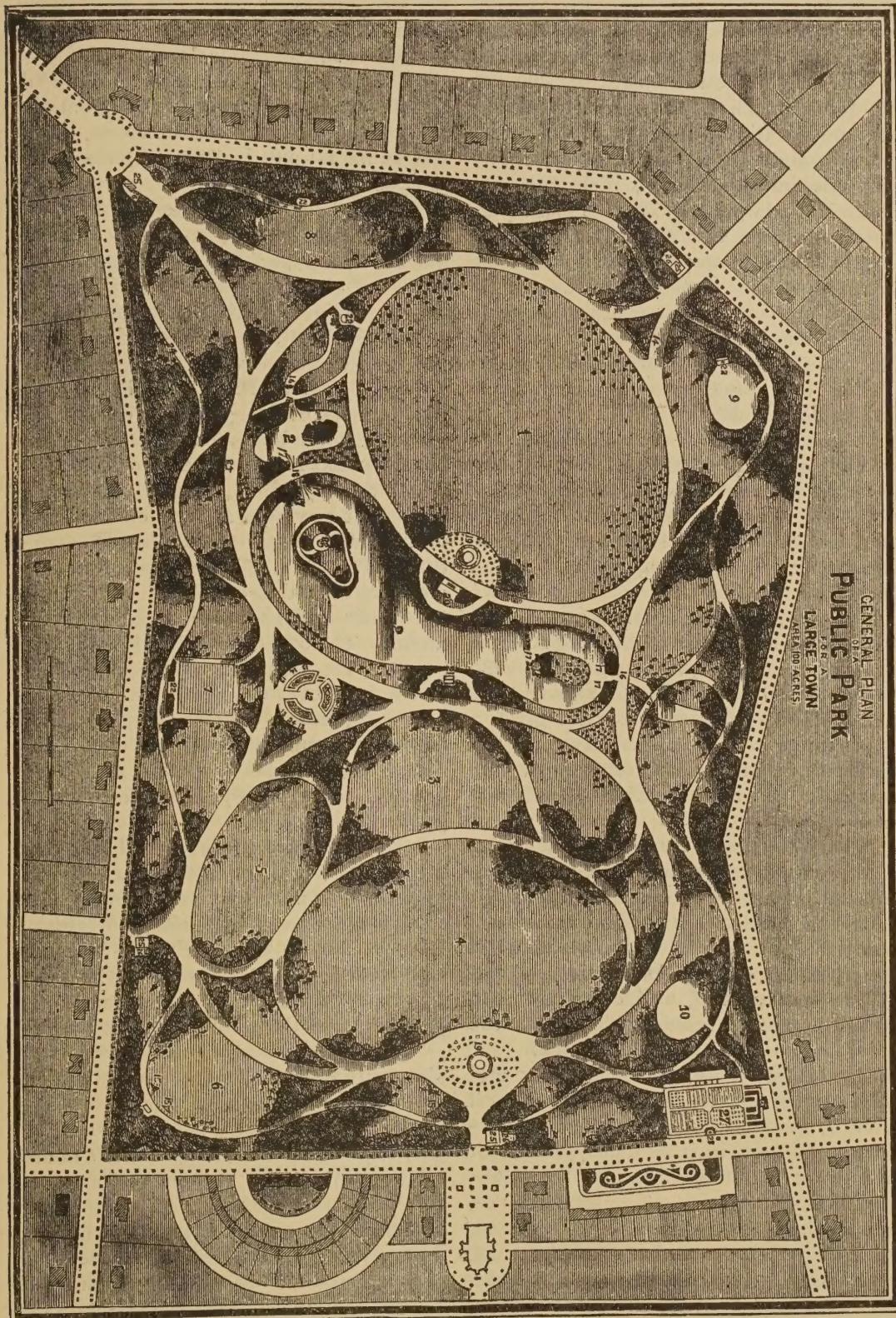
Belmont, a late ripening, firm and long keeping variety, of handsome appearance and high quality, with perfect blossoms, appears to have claims for the market garden.

The Jewell has been very favorably reported the past season from a variety of sources, as better in all respects than the Sharpless, and was awarded a silver medal by the Massachusetts Horticultural Society. It is said to be very productive, solid, and of excellent quality.

A variety called the Cohanzick is sent out from Bridgeton, New Jersey, with the claim of being wonderfully prolific. Blossom perfect; color dark crimson, and glossy; size medium to large, and very solid.

LANDSCAPE GARDENING.

At the great Provincial Show, held at Liverpool, England, last summer, a plan for a public park, designed by A. G. JACKMAN, received the highest award in compe-



tition with others. This design is reproduced from the *Gardeners' Chronicle*, and is here given with the description which accompanied it. With the increase of

wealth in our country and the spirit of improvement that is abroad, the formation of parks for our cities will become general, and the study of this plan will prove interesting and suggestive to numerous readers. The design is considered to have many high qualities, and it is easy to see how the principal features of this park can be adapted, with the necessary modifications, to various localities.

"The sight of the park, which occupies one hundred acres, is in the best quarter of a large town, and the land surrounding it on two sides Mr. JACKMAN has judiciously marked out in suitable sized plots for gentlemen's residences. On another side a terrace and crescent is marked out for good houses, with a public garden in front of each, which will be planted with flowering plants and shrubs and choice Conifers.

"The whole of the park is surrounded by wide avenues, and the park entrances are placed in the most convenient positions for easy access from the streets, with an ornamental lodge to each, 25, which gives a pleasing appearance to the park.

"The style which Mr. JACKMAN has adopted is a natural undulating surface, as being the most picturesque, and also harmonizing best with the surrounding country, and when carried out gives a much more varied appearance to the park or garden than any other style, and makes it also seem much larger than it really is.

"The site chosen for the park is undulating, and consists principally of meadows and grass fields, except on the west side, where there is a wood with a stream rising out of it, and flowing down through the grounds, which Mr. JACKMAN has taken advantage of, and converted into two ornamental lakes, which form the most important feature in the park.

"The large lake, 2, for boating and skating is fine, with its two well planted islands, and the pavilions and summer-houses placed in the most prominent places for obtaining views over the different parts of the park. The smaller lake, 2, for birds, &c., is also very beautiful, with its waterfalls and rockwork, 17, 18, in different parts, on which several varieties of alpine and aquatic plants can be grown. Both lakes are fed by a constant supply of water from the stream,

at the head of which is a magnificent cascade, 16, which, being in the wood, gives it a very natural appearance. A few walks with rustic bridges, 18, across the stream have been made so as to get good views of the waterfalls, rockwork, and other scenery round the lakes.

"The wood Mr. JACKMAN has retained, but he has also improved it by opening a few large spaces to obtain vistas, which spaces he intends to be used for archery or other amusements.

"Several small plantations of Firs and forest trees have been made in different places of the park, so as to harmonize with the above mentioned part, and to vary the scenery. All the shrubberies are raised, and are so arranged as not to interfere with the views.

"Another feature is the large open grass spaces, 1, 3, 4, 5, 6, 8, for cricket and football, which may also be used for exhibitions and for volunteer grounds. The raised band pavilion, 19, and also the refreshment pavilion, 20, are conveniently placed, with large trees planted round them, with seats, 24, underneath for shade and shelter, and to enable people to enjoy the music and games, and take refreshments. The other spaces for lawn tennis, croquet, &c., are well designed, and are distributed over the whole park. A fine bowling green, 7, is also formed, and is placed in a suitable position, with every convenience. The boys' and girls' playgrounds, 9, 10, or gymnasiums, are also a good introduction.

"The flower garden, 11, with huge fountain in the center, 12, and statuary placed in different parts, is very pretty, and should be one of the most interesting features in the park. Flower beds are also placed in several parts of the park, and give it a very bright appearance, and help to liven the shrubberies up greatly.

"As no park can be considered complete without the usual means of propagating, storing and growing plants, a large garden, 27, has been formed with greenhouses, sheds and gardener's house.

"In addition to the references cited above, we may add that on the plan, 13 indicates the position of statuary, 14 Rhododendrons, 15 that of flower beds, 19 the bandstand, 21 boat-house, 22 summer houses, 23 aquatic birds, 26 retiring rooms, 28 gardener's house, 29 greenhouses, 30 sheds."

FOREST TREES.

Our forest trees can be divided into five classes: first, the *nut bearing trees*, embracing the Oak, Walnut, Chestnut, Butternut and Beach; second, the *cone bearers*, the Pine, Hemlock, Spruce, Tamarack or Larch, and to these may be added the Cedar, which belongs to the Conifers, although bearing berries instead of cones; third, the *showy flowering trees*, including the Tulip tree, Dogwood, Shadblow, Basswood, and several species of Cherry; fourth, *trees valued for their foliage, or their ornamental fruit*, as the Maple, Elm, Hornbeam and Ash; fifth, the *families of the Birches, Poplars and Willows*. Our forest trees are all valuable for timber and lumber, those of the fifth class having less value either of the others.

There are many species of trees found growing abundantly throughout our forests not included in this list, as many of them might properly be classed as large shrubs or small trees, being less than twenty-five feet in height; our forest trees range in height from twenty-five to one hundred or more feet, and in diameter from two inches to five or more feet, as in the Pine, Elm and Oak.

There is as much difference in the appearance of the bark and the growth of branches, with their development of buds, as there is in the colors and shapes of their leaves; each kind has its own peculiar outline, which is widely different from any other. Extremes may be noticed by comparing the cylindrical outline of the Lombardy Poplar, with us a naturalized foreigner, with the almost perfect oval of a Sugar Maple.

Many intelligent persons can tell the difference between a Beech and a Chestnut tree when green with their wealth of foliage in summer time, who cannot do it in winter, which is the season to study the trees to the best advantage—color and growth of bark, relative proportion and arrangement of branches, development of buds, and, in fine, the entire architecture of our forest trees, after the leaves have fallen.

We speak of bark as dark or light, black, brown, gray, green or white; but which of these words can fitly describe all the soft woody browns, from the dull tone, which is almost black, to the light-

est ones, which have imprisoned the sunshine in their fibres; gray, that of the younger twigs of some Maples to the silvery gray of some of the swamp Poplars; green, which appears so mostly by contrast with the gleaming white of the Birches, or the warm amber of the Willows!

We speak of bark being smooth or rough. Think how much is included between those two terms, of grooved and furrowed, ridged and channeled, lined and veined, striated, angled, flaked, layered, laminated, dotted, warted, wrinkled and ragged. New bark is no mere lifeless covering, but a living skin, telling us in plain language of the life that is beneath it.

Look at a well grown Chestnut tree, with its roots branching symmetrically from the base of the trunk, generally corresponding to the large boughs above; then study the bark, deep ridges winding by slow gradations around the trunk, so perfect as to make one feel that the Titans have been carving in the broad light of noonday, each great ridge is so nearly like its neighbor. Not one of all our forest trees has so magnificent a bark as the Chestnut. Now, look at the Yellow Pine, bark rough and coarse, broken up into plate-like scales, ragged on the edges, yet with a smooth spot on each one; we think we can lift them off easily, but try it! the center of each bark scale clings all the more closely because its edges are detached entirely.

What a difference between the bark of the Black Oak and the White Birch! That of the Oak is seen in finely broken grooves, Lichens of all colors, black, brown, rusty copper, gray, green, orange, blush and white, finding a home in every depression, and spreading out till their colors meet and blend into each other up and down the trunk, from the emerald green moss on the great, uprising, gnarled and twisted roots to where the large boughs start off. Turn to the White Birch, and its smooth, satiny bark is covered with the black or brown, short, dotted lines, which are usually of a uniform length, color and distance apart the entire length of the trunk, while the rough triangular spots show where branches already are, have been, or ought to be,

while shreds of the silvery bark are waving like ribbons in the faintest breeze.

Look at the Hornbeam, with its light gray, finely furrowed bark, apparently smooth, but pass the fingers over it and feel the tiny warts; look at the lines of horizontal wrinkles close under the large boughs, note the absence of the common green or gray rosette-like Lichen, which is so abundant on the bark of the tree standing nearest, a young Walnut, whose bark looks as if the next wind that came whirling over the hill would carry it off in a trice as easily as it will the few scattered ochre-colored leaves that still cling to the slender branches on its far-away top.

See how the roots of the Hornbeam spread out, star-like, just at the top of the ground. The Hemlock, just beyond, has not a root visible, its low, branching limbs and, soft, deep green, feathery foliage serve to hide the myriads of tiny cones that hang from the under surface of every branch and twig. The great crow's nest in the very top does not break in the least the dark pyramidal outline against the dull gray sky. There are a few tufts of moss scattered up and down the rough dark bark of the trunk, a little nearer together and a little thicker, perhaps, on the north side.

Compare the smooth, light gray bark of the Beech with that of the Black Oak, almost black in color on old trees, rough, coarse, yet showing now and then at the edges of its furrows its yellowish lining. Did you ever notice how the softest and greenest of all the mosses cling to the decaying bark of a dead Black Oak? Up and down in every channel, not one or two, but half a dozen different species, and orange and white Lichens everywhere.

Patient study of our forest trees, after the leaves have fallen, will teach us that there is not one whose net-work of spreading, branching, interlacing boughs is like unto any other tree, and while trees of the same kind throw off their branches at the same angle and preserve the same general outline, they differ in these respects from trees of every other kind.

BUSKIN states the following fact that is common to all forest trees, "that branches do not taper but divide." Study a well grown Maple tree which has had

abundant space for development, and be thoroughly convinced of its truth. Notice the size of the boughs, and see how closely they are set together, yet each one starts off with sufficient material to reach a terminal line, allowing for its many ramifications, and every bough starts at just the right angle to preserve the symmetry and regular established outline of a Maple tree; not a branch but has crooks, angles, spaces where the buds have dropped off; but we know if they had been retained the bough could not have reached its limit, and thus the perfect outline of the tree would have been destroyed. Nature, who never makes mistakes, has her own way of illustrating the survival of the fittest.

Note the contrast between the finely furrowed bark and graceful delicacy of the extreme tips of the branches; the largest bough that starts off is less than one-fourth the diameter of the trunk, but the next bough is placed less than one-half that diameter above it. Year after year the silent growth goes on, a branch here and a branch there, the main bough growing smaller at each dividing. Now and then, there is a long, straight, awkward branch, with neither a bud nor twig, and we are sorry that it did not take along sufficient material to reach its terminus and remain graceful as well.

Winds may make angles and unsightly twists on the tender sapling, but when the diameter of an inch or more is reached, the fiercest gale cannot remove it. Now and then a young tree looks ungraceful, but the aged tree, with its spreading roots, furrowed bark, and gnarled boughs, which have given shelter to the birds through a century or more, has a strength and grandeur and character of its own, which are more than grace or beauty. Who would call an old Oak beautiful? But is there a tree lover who does not prefer it to the smooth, graceful, perfectly proportioned tree whose smallest terminal twigs are outlined like brown spray against the winter's sky?

There is a vast difference in the relative proportion of trunk and bough, but one law holds good, the smaller the size of the boughs the greater their number. The tree that puts forth large boughs has but few, as in the Elm, which is just the reverse in the Maple.

It is difficult to study well the forest

trees after they have put forth their leaves. Says RUSKIN, "The disciplined eye and the life in the woods are worth more than all botanical knowledge," and RUSKIN is partly right, but one must be not only a true lover of the woods, but of individual trees to be able to describe them intelligently. THOREAU, in the Maine woods, and by Walden pond, entered so completely into the very heart of all the life and growth about him that his quaint thoughts are as fresh to-day as were the Pine breezes when he wrote them.

From root, trunk and boughs the transition is easy to leaves. First, as to their color; we say, in general terms, that leaves are green, but that word does not express the wonderful play of light and shade that makes each leaf on a forest tree unlike any other leaf; from the deepest green which is tempered with blue or gray, to the silvery light on Aspen and Birch, there are wonderful tones of color and harmony. The colors put on by the Great Painter are not only always harmonious, but always blend into each other by such insensible gradations that we cannot tell where one stops and the other begins. Looking at our forest trees, in masses or as individuals, in fields or on the hillsides, we find that they are always in perfect harmony with their setting and background, there may be a leaf point in full relief here and there, but foliage always presents to us a perfect unity as a whole.

On some trees the leaves stand upright, exposing upper surfaces only to the sunlight, others droop and sway lightly in the faintest breeze; the poise of every leaf is due to the flexibility and relative

size and strength of the stem which belongs to it. The glowing hues of our forest trees in autumn are always sources of wonder and delight to the sojourners among us from beyond the ocean. It is thought that the brilliant scarlet and gold, flame and bronze foliage of our forest trees is more gorgeous in New England than elsewhere.

As the leaves drop in the autumn the buds stand forth plainly visible, promise for the summers yet to be; some are so small and pressed so closely against the bark as to be scarcely discernible, while others are bright in color, as the crimson bud of the striped Maple, or the warm brown of some Willows contrasted against their orange-colored bark. As the winter goes on the buds slowly swell till a warm March day comes and the children meet us, holding up gleefully "Pussy Willows" on the fragrant, sticky, cone-like buds of the Balsam Poplar or Balm of Gilead, and we wake up some April morning, and find that the northwest wind during the night has carried off the shining brown leaves of the Oaks, which have hung on all winter, and lo, the buds which until this time have been hidden by these same dead leaves, are almost bursting, and all over our New England forests nature's great miracle-plays are to be acted again, as they have been since that far back, "in the beginning." The forest tops grow green, and the first rainbow of the year hangs low in the east as a sign of the promise, "While the earth remaineth seed time and harvest, cold and heat, summer and winter, day and night shall not cease."

F. I. W. BURNHAM.

THE OLD WORLD AND THE NEW.

Generally, we have in mind only the chronologic difference—the difference of length of written history—between the two continents, when we use these terms. But they are quite as applicable to their conditions, worn, wrinkled, dried and springless on the one side, and fresh and full of means and capacity on the other. And it is well to look at it in this way, if only to check the wantonness of our young land from rushing heedless along the declines that lead to premature age.

An article in the April *Harper's Magazine*, "What we owe to the trees," by N.

H. EGLESTON, cites some truly alarming examples of this decadence; enough to make one see plainly that destructive man, aided by his domestic animals, is rapidly rendering the earth uninhabitable by his species, and hastening the time when it will become a dry, bare desert, such as astronomers' instruments show the moon to be.

The countries of Western and Central Asia, once teeming with a population of vigorous people, where was the garden of Eden, and cities of greater extent and grandeur than any now existing, are now

so sterile and so parched that only a few wandering tribes, inured to heat and thirst and scantiest diet can eke out a miserable existence there. "Palestine, once a land flowing with milk and honey and crowded with cities and villages," is little more now than dust and rock and half-buried ruins. Asia Minor once contained five hundred populous cities. All of Northern Africa was fertile, rich and populous. "Three hundred cities were subsidiary to Carthage, the rival of Rome. In Libya were six millions of people and eighty-five Christian bishops, where there are now but sixty thousand." Spain is now in great part a desolate, dreary common, though once famous for luxuriant woods and verdant pastures. Even the British Isles are reduced in great areas of their surface to bleak, bare moors and heaths and downs, although they were covered with forests where swineherds tended their flocks as late as A. D. 1400, for in the civil Wars of the Roses field culture was too unsafe for practice. Now Great Britain imports forest products

from other countries, after using nearly all her own, to the amount of one hundred million of dollars yearly.

Mr. EGLESTON's full paper shows, in the strongest light, the necessity which exists in the new world for a speedy institution of schools of forestry and arboricultural practice. Our newly instituted Arbor Days should be observed with the devotion of religious ceremony, for they involve much more than shade and beauty; there is bound up in their observance the continuance of our race and the ability of our mother earth to supply food for her more and more numerous children.

It is a fitting study for the clergy, who cannot use their pulpits to better purpose than in directing attention to the means of averting eventual want, distress, crime and death from entire communities by preserving all the foliage possible on every portion of the soil surface, and in every nook and corner not absolutely required for roads, buildings or tillage.

W.

THE WINDOW GARDEN.

In regard to the many enemies which attack plants when in-doors, "an ounce of prevention is worth a pound of cure." We may prevent their coming, but after they have once put in an appearance it is rather a difficult matter to get rid of them. One very tormenting pest is a little black fly which multiplies very rapidly, and does a great deal of injury if not cut short in his career. I find giving a teaspoonful of soot, or fine wood ashes, to the soil very beneficial, and excellent in fertilizing. I always apply it as soon as I bring plants in. Plants liable to aphid must be closely watched, and, as a prevention, washed in tobacco tea. I effectually killed and exterminated them utterly from some small Chrysanthemums by washing in a suds of whale oil soap, not too strong. I wash Verbenas in weak tobacco tea, and sprinkle a little fine cut tobacco on the soil in the pot. Plenty of moisture is death to the red spider; a good steam bath once in two weeks damps his ardor and makes him lose his strong hold. If the soil is rich enough I do not see the need of much fertilizing in the pot, except with some plants. Geraniums are really better without it. I

occasionally use ammonia, as it imparts a beautiful green to the foliage. Keep all decayed leaves well picked off, as well as faded blossoms; this should be done for the well-being of the plant as well as for the tidiness of the window. I always keep plants that are inclined to grow "upward" well pinched off and shapely; anything but a great, tall, one-branched Geranium, one can just as well have a symmetrical bush of it, if taken in time. I give my plants a thorough sprinkling at least once a week, and a judicious airing every day, if possible, letting an outer door stand open for awhile when the weather is not too cold, and increasing the heat within, if necessary. I "hoe" my pot plants frequently, the soil on top of the pot is inclined to harden, no matter how one may have tried to prevent it by different mixtures of sand, &c. By loosening it, the water penetrates and reaches the tender rootlets; a little sharp-pointed stick is a good instrument for the purpose. Careful study of the wants and requirements of each plant is the only way to become a successful cultivator, and this is only secured by attending closely to their many needs.

M. R. W.

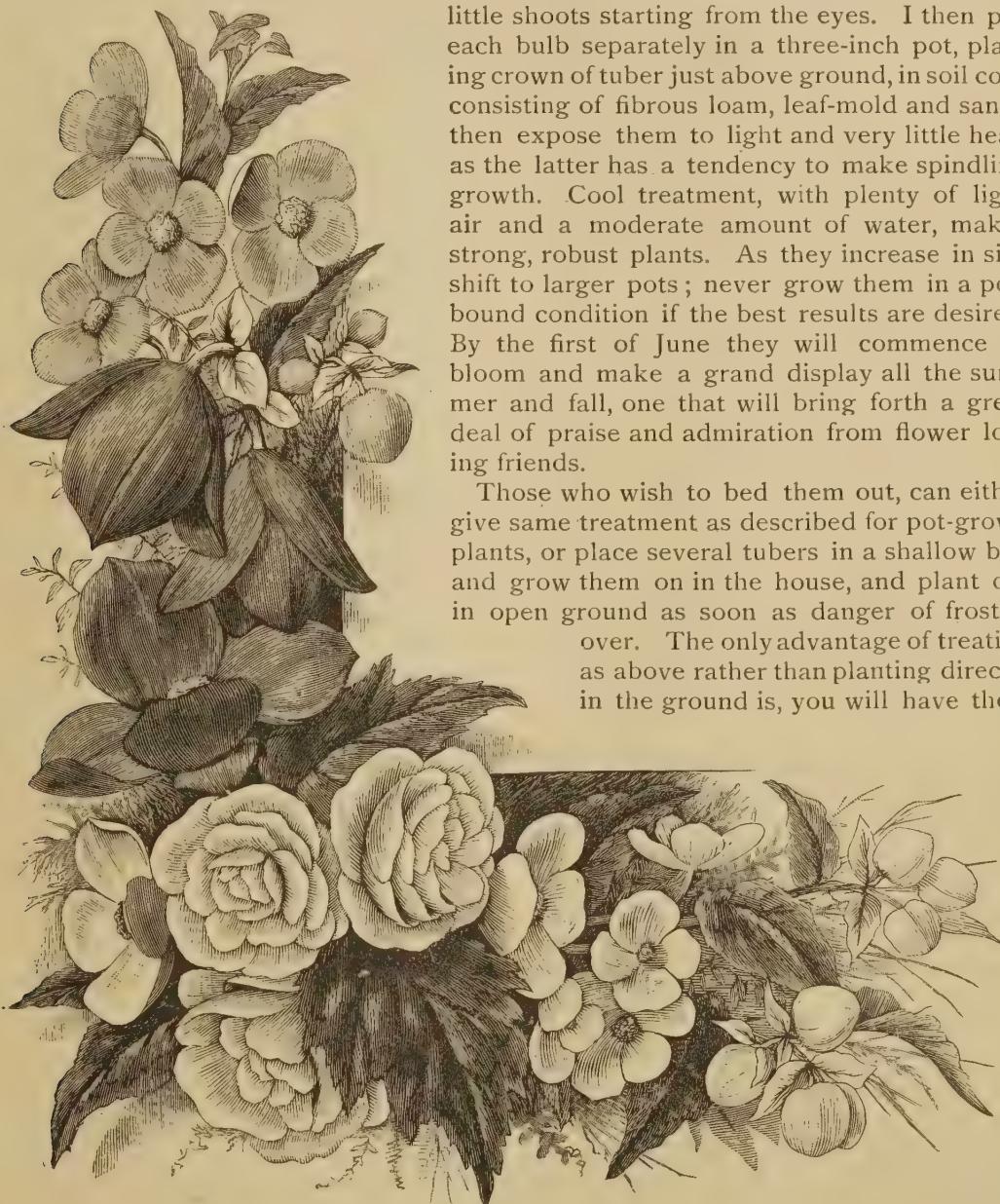
TUBEROUS BEGONIAS.

The Tuberous Begonia is certainly destined to become a prominent plant with us, as it already has in England and some of the European countries. It is very accommodating, is either suitable as a bedding plant or for growing in-doors in pots. It is as easily cultivated as the Geranium, and equally as free from disease and insects. Its colors and shades are various, from pure white to the most dazzling scarlet, in fact, I know of no other plant with more brilliant flowers than the Tuberous Begonia in some of its new varieties; pure yellow, and all shades of pink and salmon are alike represented. Their forms are as varied as their colors; some are round and cup-shaped, while in others the petals are long and pointed. Some are as double as Roses, and for size—well, here I will find a good many doubters—it is not uncommon to find blooms measuring six inches in diameter on some of the named varieties. My collection embraces upwards of thirty named sorts, selected from both Cannell and Laing's English strains, and hundreds of seedlings of my own raising. Some of the latter are equally as beautiful as the named sorts.

In March or April the tubers will

show signs of growth, the same as a Potato, by little shoots starting from the eyes. I then pot each bulb separately in a three-inch pot, placing crown of tuber just above ground, in soil consisting of fibrous loam, leaf-mold and sand; then expose them to light and very little heat, as the latter has a tendency to make spindling growth. Cool treatment, with plenty of light air and a moderate amount of water, makes strong, robust plants. As they increase in size shift to larger pots; never grow them in a pot-bound condition if the best results are desired. By the first of June they will commence to bloom and make a grand display all the summer and fall, one that will bring forth a great deal of praise and admiration from flower loving friends.

Those who wish to bed them out, can either give same treatment as described for pot-grown plants, or place several tubers in a shallow box and grow them on in the house, and plant out in open ground as soon as danger of frost is over. The only advantage of treating as above rather than planting directly in the ground is, you will have them



in bloom three or four weeks earlier. You must take the precaution to not over water them, especially in the younger stages of their growth, as they are liable to damp off.

To me, one of the most interesting features of growing Begonias is raising them from seed. Each tiny plant is eagerly watched during its different stages of growth, finally the buds appear, then, at last, the long-looked-for bloom, which amply repays for all the care. Begonias are not at all difficult to raise from seed if not neglected. The first thing is to obtain the very best seed possible. This is an important item, as it requires just as much care to raise a poor seedling as a good one. I usually sow first lot of seed in November, and continue each month until latter part of February. Fill a small cigar box with fine sifted loam, and place the box in shallow tin tray, into which pour water until the soil has absorbed enough to become quite moist. Sprinkle the seed as evenly as possible on the top of the soil, not getting it too thick. I rarely cover the seed at all; occasionally sprinkle very fine cocoa-nut fiber over them, although I do not see as it makes

much difference in their coming up. Place pane of glass over box and never let the surface get dry, always pour water in the tin tray. The seed box should be placed in a warm situation. In the course of two or three weeks the seedlings will begin to make their appearance. As soon as the second leaf shows itself, prick out a dozen or more in a four-inch pot, and as soon as they begin to crowd each other repot in single pots.

In October, or as soon as they are cut down by the frost, or show signs of rest, dig up bulbs, cut off tops and pack in dry sand. Keep in any frost-proof cellar. They are as easily kept as Gladiolus. The pot grown plants should be gradually dried off and kept in the same manner.

Among the doubles I find the following fine : Louis Bouchet, a brilliant orange red, plant is of a dwarf, branching habit and loaded with blooms; Comtesse H. de Choiseul, rosy white; Gloire de Nancy, vermillion; Madame Crouse, flesh rose, shaded salmon buff; Pæoneflora, enormous flower, salmon rose; Rosa Monde, rose color, extra large.

WALTER L. GUMM, *Remington, Ind.*

PLANTS FOR AMATEURS.

It is, perhaps, hardly necessary to state that the Geranium is easy of cultivation, so well known is the fact to nearly all those who take an interest in house plants. There are many other varieties of plants, however, which require quite as little attention as the popular Geranium, and yet give very satisfactory results.

"Variety is the spice of life," it is said, and nowhere is it better exemplified than in the floral world, where the eye is never wearied by sameness, the infinite variations of form and color being a constant and unending delight to all who admire these beautiful specimens of the handiwork of the Great Creator. So, while we esteem and prize the Geranium, tried and true, we need not be deterred from increasing our collection by the impression that most other plants are difficult to grow.

The Chinese Primrose is nearly, if not quite, as easy of cultivation as its better known rival, and is more satisfactory in some respects for winter culture. A little

care in the matter of watering, not to wet the buds or foliage, and not to over water, and the simple requirement of mellow earth for its delicate fibrous roots, and you will find yourself in possession of one of the prettiest and most delightful plants in existence, and one which adds to its charms of beauty in foliage and flower that which the Geranium does not have—perfume. Just when there is nothing but bare trees and sere grass for the eye, or the appalling expanse of dazzling white which winter spreads before us, you can catch from your Primroses a grateful sight and the fresh odor so suggestive of the coming spring that you can imagine the season already begun within your home, no matter how repellent the prospect without.

The Hoya carnosa is a very patient and long suffering plant, and if trained on a trellis, that it may have the benefit of the sunshine instead of being pinioned to the wall in some shadowy corner, will pay well for this attention with its sweet velvety flowers.

Another plant of powerful odor, though rather inconspicuous blossoms, and which is of the easiest culture, is the Night Blooming Jasmine, as it is commonly called. This shrub is very pretty if properly trained, with its willowy stems and clean, shapely leaves of bright green.

There are many Cacti, which are the best of house plants for the amateur, if he will only remember to keep them in the sunshine during a period of three months or so every year, in order to ripen the succulent new growth, and the equally necessary caution about over watering, especially when the plants are not in bloom. I well remember my struggle with a refractory *Cereus flagelliformis* which had defied the continued efforts of a family for a period of, I dare not say how many years, perhaps ten or more, to coax flowers from its stubborn branches. Having some faith in my own ability, born of my previous success with house plants in general, I procured a piece of this venerable institution and potting it in good earth placed it in a north window and awaited the result. Under the new regime it increased in size wonderfully, putting out immense green shoots. Like an individual of ancient times, it "waxed fat and kicked," for not a bloom would it produce. Transferred to a south window, for a time it sent forth some feeble buds, which, alas, were blasted, with my hopes. Happening, at last, to read something about the necessity of ripening the Cactus in the sunshine, and getting so desperate with my failure that I cared little whether the plant lived or died, I set it on the window ledge on the west side of the house; there the sun could shine on it during the long summer days, and the rain could give it but an occasional drink, which I rarely supplemented by any other drenching, feeling, perhaps, a spiteful wish to pay off the obstinate plant for past misdemeanors. The poor thing remained on its perch until late in the season, the drooping shoots grew lean and attenuated, and looked as if they were indeed doing penance for their former misdeeds; but at last I put it in the bay window, and supplying the water so long withheld, in due season the plant burst forth into marvellous beauty, with its profusion of brilliant flowers, as if trying to atone for its years of failure—

failure more on the part of the cultivator than that of the much reviled Cactus, as the event proved.

Phyllocactus phyllanthus I find, after years of experience, to be one of the hardest of house plants, and least exacting in its requirements. A moderate-sized pot to grow in, with a good rich soil mixed with sand, and a dash of air-slaked lime or old plaster, an occasional watering, and sunshine at least a part of the year, and your few efforts will be rewarded with the loveliest flowers vouchsafed to mortal vision, and so fragrant that the odor of a blossom will fill not one room but several. The flower is almost identical in appearance with that of the *Cereus grandiflorus*, but for the fact that it is smaller and pure white excepting the outer part of the flower which is light reddish brown. This Cactus has blossomed for me periodically for weeks, and I don't know but months in succession. With proper care, which I rarely give it, I think it might be had in bloom half the year, at short intervals, as it has a way of doing. The smooth, large leaves are easily kept clean, and it is free from the spines which render most of the tribe rather difficult to handle.

There are many other plants with which the amateur can easily succeed, such as *Ephiphyllum truncatum*, which is one of the finest basket plants, the *Rivina humilis*, *Euphorbia splendens*, *Gloxinia*, *Coronilla*, and hosts of varieties which seem to be destitute of the cranky peculiarities requiring the skill of a professional gardener, all the resources that wealth can command, and the patience of Job to develop anything satisfactory out of them.

The enthusiasm of many amateurs has received a sudden and painful check by the purchase of some expensive flower described in glowing colors in florists' catalogues, and the consequent failure and demise thereof; the natural result of trying to grow a plant of whose requirements one knows nothing, and which, very likely, it would be almost impossible to succeed with except under the most favorable circumstances in the kindly atmosphere of the greenhouse. Until such time as some of our florists conclude to be a little more explicit in their descriptions of plants, to enable amateurs to decide what they can cope with, it would be

well for them to stick to beaten paths and only try those which can be grown by such appliances as are within the reach of ordinary mortals, and much loss of money and temper will be the result.

MRS. H. R. LUNEY, *Hoosic, N. Y.*

FERN CULTURE.

Many rooms which have not the light necessary for success with flowering plants during winter are well adapted for the culture of what are termed fine foliated plants, such as are grown for their ornamental foliage and fine habits. A partially shaded window is just what some of our finest species of Ferns delight in, and when mixed or associated with Hyacinths, Tulips, and other bulbous plants, a charming effect can be attained. Take a plant or two of any of the Maidenhair Ferns, place alongside of them a few plants of different colored Hyacinths, and nothing can surpass for modest beauty a window so filled, especially if nature is clothed out of doors in her winter garb. Such little additions to home adornment make us feel more happy, more contented, and add to every inmate's comfort.

Ferns are easily cultivated if a few practical details are observed. Growing in their native habitats they are, for the most part, found in shady positions, where, during their growing period, they have an abundance of moisture at their roots; therefore, under cultivation, a shady window is for most kinds more suitable than a sunny one, and during their season of growth a good supply of water at the roots is demanded. While it is necessary for their success to have an abundance of water, they are at the same time very impatient of a stagnant soil, and to prevent anything of the kind occurring, perfect drainage is indispensable. Not only is drainage a necessity in the cultivation of Ferns, but it is also needed in the culture of all kinds of window and greenhouse plants after they have attained a certain size. No plants do I know, except aquatics, that succeed in a soil from which the water does not pass off freely. Plants growing in pots six inches in diameter and over, should have good drainage. This may be done by placing over the hole in the bottom of the pot a piece of broken pot, over this place more of the same material in small pieces, instead of this pieces of charcoal answer well. Fill about one-fourth of

the pot in this manner, and over the top place some moss or other rough material to prevent the soil from mixing with the drainage, and thereby preventing the water from passing freely off.

The most suitable soil for Ferns is a mixture of garden loam and the black soil found in the woods, about equal parts of each, then with a good sprinkling of sharp sand through the whole, giving more if the loam is clayey and less if sandy.

Never use too large pots for Ferns, especially the finer growing kinds. After potting give a good thorough watering, and keep shaded for a few days until root growth commences, after which they can be inured to the light. If possible, never repot Ferns until they have commenced to grow. I have often seen valuable specimens lost by repotting when at rest. Ferns generally are not very liable to insects, the most troublesome being the brown scale, thrips, and occasionally on the young shoots green fly. The only way of getting rid of the scale is by sponging with clean water, care being taken not to injure the fronds. Old fronds when badly infested with this pest should be cut off. Nothing mars the beauty of these plants more than old and partially decayed fronds, and they should, whether covered with insects or not, be removed as soon as they appear unsightly. Fumigating with tobacco smoke destroys the thrips and green fly, care being taken not to have it too strong, as there is a risk of hurting tender fronds. In greenhouses snails are sometimes injurious to Adiantums; they eat the fronds as they start into growth. By laying pieces of cut Potatoes or Turnips about, the snails will leave the plants for the juicy vegetables, and can then be caught and destroyed.

Some Ferns are well adapted for basket culture. The best kinds of baskets for this purpose being such as are made of wire. Nothing looks much prettier than a basket suspended from the center of the window filled with a good healthy plant of any suitable Fern, such, for in-

stance, as the *Nephrolepis exaltata*, an evergreen Fern, having long, sword-like fronds. This plant looks best in a basket alone, and soon forms a large round ball, the roots coming through the bottom of the basket, and from these are produced new plants, and then appears a large, compact mass of leaves above and below.

Platycerium, or Stag Horn Fern, is also a good basket plant, and, like the above, withstands a dry atmosphere for a long time with impunity.

Adiantums, or Maidenhair Ferns, make most beautiful pot plants, most of the species being well adapted for culture in the house. Their fronds are also very useful for bouquet making, and, in fact, floral work of any kind.

Adiantum cuneatum. This species is one of the best known, of graceful habit, and one of the easiest grown.

A. decorum. Another species well adapted for house culture, the fronds in a young state being of a beautiful pink color, becoming bright green with age.

A. Farleyense. The most magnificent

of all the Maidenhair Ferns; the fronds are of a pendulous habit, and the pinnæ large and deeply fringed, giving it a striking appearance. I have tested its qualities as a house plant, and find it one of the best for this purpose, enduring well the dry atmosphere of the sitting-room.

Pteris tremula is a large-growing Fern, well adapted for pot or basket; of easy culture and a bright green color.

The different varieties of *Pteris serrulata* are all suitable for the window garden; some of them have the ends of the fronds crested, giving them an unique but attractive appearance.

Several of the *Davallias* make fine basket and pot specimens, one of the most beautiful being *D. Tyermanii*, having long rhizomes from which are produced large, triangular-shaped fronds, finely cut, and of a dark green color.

There are several species of Tree Ferns which, in their young state, are very suitable for growing in the house, but soon outgrow any small space. The best of them being *Alsophila australis* and *Dicksonia antarctica*.

M. MILTON.

AMONG THE TREES.

O, ye, who love to overhang the springs,
And stand by running waters, ye whose boughs
Make beautiful the rocks o'er which they play,
Who fill with foliage the great hills, and rear
A paradise upon the lonely plain,
Trees of the forest and the open field!
Have ye no sense of being? * * * *

* * * * *

Nay, doubt we not that under the rough rind,
In the green veins of these fair growths of earth
There dwells a nature that receives delight
From all the gentle processes of life,
And shrinks from loss of being. Dim and faint,
May be the sense of pleasure and of pain,
As in our dreams; but, haply, real still.

BRYANT.



FOREIGN NOTES.

HARDY PLANTS FOR FORCING.

The Persian Lilac is an admirable subject for early forcing. The simplest way to manage it is to have three sets of plants growing in the open ground. This will give a change of plants every third year, and during the interval they will have time to make fresh growth and recruit their strength. The plants may be lifted and put into the pots in which they are to flower, and after standing in a greenhouse temperature for a fortnight they may be introduced into the forcing pit. A temperature of 60° is high enough to bring them into flower. As soon as they go out of bloom the branches should be pruned hard back, and at the end of May the plants may be returned to the reserve ground. *Spiraea Thunbergi* is also useful for forcing into flower early. It may be treated as is recommended for the Lilac, and then there will be strong plants to select from. As it flowers on the wood of the previous year's growth, all the young branches must be taken care of. Every bud on these shoots will give a bunch of flowers, which are white, and these are accompanied with just sufficient fresh young leaves to make them acceptable. The double-flowered Plum is also an excellent plant for forcing. The flowers, which are in the form of little rosettes, are of snowy whiteness. This Plum is readily propagated by means of cuttings of the young wood, and in three years the young plants may, with liberal treatment, be had large enough to force. Under the three years' system of forcing they make excellent growth. Excepting the year in which they are to be had in flower they are cut down to within a few inches of the ground, as they produce the most flowers on the previous years' growth.

For early forcing the *Astilbe Japonica* the best results are obtained by growing the plants in pots. For later work, plants grown in the open ground and potted up in November do very well. With respect to growing the plants in pots, I must be more explicit, and say that plants for early forcing in 1888 should be potted during the present winter, and be grown altogether in

them. Plants so treated, owing to the confined root space, ripen off their leaves earlier in the autumn than those grown in the open ground, consequently they have a longer rest, and are more readily brought on when introduced into a higher temperature. To grow them successfully the pots should stand in saucers of water all the summer, and if it is manure water so much the better. Those to be grown in the open ground should be planted out where the soil is rich and deep. Whether large or small plants are wanted, the best way to increase the stock is by division of the root. The pieces should be planted out eighteen inches apart each way, and during dry weather in the summer they must be liberally watered, as they are moisture-loving subjects. When potted up in the autumn for forcing they should be placed in as small pots as possible without mutilating them too much. The *Astilbe Japonica* requires a temperature of 65° to 70° to bring it into flower by the beginning of February.

Gardeners' Magazine.

GERMINATION OF SEEDS.

A writer in *Gardening Illustrated* says : "It should be well understood that the germinating power of seeds is in inverse ratio to the quality of the strain. Inferior strains of florists' flowers give plenty of seeds, and these come up much more readily than the choicest varieties. This will, in a measure, account for the better success that one of your correspondents states he has obtained with cheap packets. I do not assert, however, that choice kinds are not sold in low-priced packets ; but my experience is, that if you want the best article you must pay a fair price for it. Let not those who have failed be disheartened ; let them go to an established firm that has acquired a reputation, and if they are inexperienced they will do well not to aim too high, but to try their hands on things that are comparatively easy to get up. A hint or two in conclusion may be useful. Never sow seeds in a flower pot without previously well moistening the soil ; never let the

sun shine on it, nor, if possible, a current of air get to it. Cover the pot with moss, or a piece of paper, till the young plants appear. If seeds have any value, this treatment will bring them through."

All of the above is well said, and it is as true of vegetable as of flower seeds. To get the best results in the garden the best seeds must be had, and then care must be given to the preparation of the soil and their germination.

PLANTS FOR ROOM DECORATION.

It is really surprising how long some plants, notably the Maidenhair Fern, will remain healthy, either in a window or in a fairly light position, provided no cold draughts of air or water are given them, and they are carefully watered. Several of the Adiantums, notably palmatum, gracillimum, assimile, Capillus-veneris (of which magnificum is the best form), mundulum, Lawsonianum, formosum and Williamsi are very serviceable for house-decoration, and will keep fresh for a long time. The same may be said of Pteris serrulata and its various crested forms. P. tremula, Asparagus plumosus scandens, and such Palms as Areca Baueri, Chamærops, Kentia australis, Latania borbonica, Phœnix dactylifera, and Seaforthia elegans are all good for house-decoration, and those and other kinds mentioned are available for those who may only possess a greenhouse or cool conservatory in which to grow them when not required in the house. Pans or pots of Selaginellas are very effective in the house; and I know instances where they are kept near a window all the year round and always look fresh. For this purpose I can recommend S. Kraussiana (denticulata) and its golden and silver forms, Wildenovi and stolonifera. I know a case in which a handsome plant of the Filmy Fern, Todea superba, has been grown in a large pan under a bell-glass for six years, and it annually improves. It stands under a stained glass window at the end of the principal staircase, and being frequently watered and never allowed to become very dry overhead, it is always attractive in appearance. Begonias of the Rex type are also good house plants, and everybody must know what a good servant Ficus elastica is. Of greenhouse flowering plants Arum Lilies prove the most difficult to kill, and

under fairly good treatment plants in seven-inch pots will flower freely in a window. Cyclamen Persicum also thrives and blooms well under similar conditions; but Chinese Primulas are apt to lose color, and present a miserable appearance unless much favored. Cinerarias are not easily kept clean. Cypripedium insigne will last on a table, not far from the light, longer than any other flowering plant, provided always it does not suffer from want of water. Epiphyllum truncatum, or Crab Cactus, as cottagers prefer to term it, will, if not over-watered or over-potted flower beautifully in a window.

W. I., in *The Garden.*

FRUIT AND GRAIN DIET.

At a late fruit banquet of the London Auxiliary of the Vegetarian Society, Dr. NICHOLS said that fruit was a perfect food, and the Apple alone was able to sustain life and health for a very long time. Why, then, he asked, needlessly take the life of any creature, when they had at hand so much delightful food? He had been a vegetarian for fifty years, and during that time he had had only one week's illness. Mr. A. F. HILLS pointed out that the vegetable-feeders were among the strongest of animals—for example, the horse and the elephant. Dr. ALLINSON was of opinion that vegetarianism would do away with the need for the services of members of his profession. Fruit contained vegetable substances that were very useful in carrying away the injurious mineral matters that tended to increase in the system. A mixed diet of fruit and grain was the most valuable that could be devised. They could easily see if anything was wrong in the condition of fruit and vegetables, but a great deal of risk was run when flesh was eaten. Professor MAYOR quoted Sir HENRY THOMPSON's observations to the effect that more people injure themselves in this country by over-eating than by over-drinking—the injury resulting not altogether from eating too much, but also, to some extent, from eating too many kinds of food. Mr. MANNING, the London Superintendent of the Society, expressed the belief that, if people generally adopted the system of vegetarianism, the farmers would gradually be helped out of their difficulties.

Gardening Illustrated.

PLEASANT GOSSIP.

CELERY—GRAPES—PEARS.

Last year, I placed my Celery, Boston Market, in stable cellar, and partly covered it with mixture of sand and loam, and none of it decayed, keeping until March. They were small bunches. This year I treated it in the same way, and the past few days it has commenced to decay at the heart and is rapidly going, more particularly that portion which grew very large.

My Grapes set well, and never have I seen grown out of doors such large bunches of fair fruit as my vines contained last summer and fall; they were a wonder. They grew to be of full size, and, although we had a late season, they did not ripen. My Agawam, Brighton, Iona, Salem, Martha, Prentiss, Pocklington and others were almost worthless after promising immensely.

Many of my fall and winter Pears, although promising well, did not mature, would not ripen; Duchess d' Angouleme, Goodale, Beurre Claireau, Beurre d' Anjou, Josephine de Malines, Brockworth Park, President Drouard, and Souvenir du Congres.

My soil is rich thirteen to eighteen inches deep, then shale rock. I watered my Celery during growth. My Pear trees I did not water. I watered Grape vines very little and placed straw around them. Can you give me any information by which I may profit another year?

J. H. R., *Hartford, Conn.*

The Celery has been kept too moist—perhaps it has been placed too deep in the soil, or had too much placed around it. Enough soil to cover the roots three or four inches deep would have been plenty.

The Grapes did not ripen because the soil is quite rich, was watered and mulched—a state of things that kept the rootlets active until late in the season, thereby affording the vines an abundant supply of sap, increasing the size of the fruit, but not permitting the chemical changes that result in the condition known as maturity or ripeness.

The failure of the Pears to ripen is due to the same cause.

It is possible that underdrainage might be beneficial in this case.

CLIMBING OR PILLAR ROSES.

Please tell me how to train and prune a Pillar Rose.

MRS. J. G., *New Westminster, B. C.*

Climbing Roses should be set in soil that has been well enriched, and an annual dressing of manure should be supplied to the space occupied by their roots. In planting a young Rose of this kind

50

cut back the top within a few buds of the base, and allow three or four shoots to grow the first year. The second season cut out all but two of the shoots and shorten these back at least one-half their length, and then allow only one cane to grow from each. These canes can be trained up, one on each side of a pillar as they are growing the second year, or be allowed to grow naturally that season and be put in position the following spring. They may be trained directly up the pillar or be wound spirally about it. When trained on the surface of a wall they may be given whatever direction is best to cover it. The flowers will be borne on the side shoots sent out from the main canes. The bearing shoots must be shortened in, or spur-pruned, while dormant, after each season of bloom. The main canes can be extended from year to year, as may be desired, and as the plants become strong, branches can be started from them to carry flowering shoots in the same manner as the main canes.

The varieties of the Prairie Roses are most hardy and best adapted to out-door culture; for the conservatory, Gloire de Dijon, Lamarque, Marechal Niel, Reine Marie Henriette and Perle des Jardins are among the best.

THE RUSSIAN APRICOT.

A variety of Apricot by this name, and botanically, *Prunus Siberica*, is now attracting the attention of fruit-growers. It is said to have been brought to this country several years since by the Russian Mennonites, and planted throughout Kansas and Nebraska, where it has proved entirely hardy and healthy, quite productive, bearing a handsome, golden yellow fruit, of medium size, sweet, and of good quality.

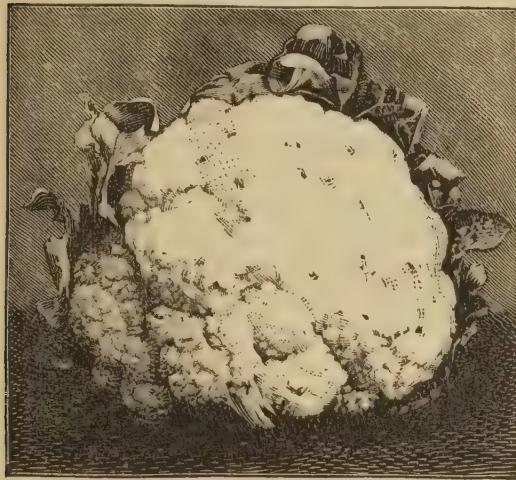
WATER CRESS IN PARIS.

Statistics show that in the year 1885, more than eleven millions of pounds of Water Cress were consumed in Paris.

CAULIFLOWER AND CELERY.

It may be of as much interest to you as pleasing to the party interested to know "what went with" the packet of "Ideal Cauliflower" seeds I procured last spring, and this is the report :

April 23, 1886, sowed Cauliflower seeds, "Vick's Ideal." By actual count there were just one hundred seeds, from which I obtained ninety-eight good healthy plants. May 14, set plants in garden. In the fall I gathered eighty-four heads of



VICK'S IDEAL CAULIFLOWER.

the nicest creamy white Cauliflowers that I ever saw; not a leaf grew up between the curds. They were not over large, but of a good, uniform size, solid and juicy. Six plants seemed to be of a different kind, as they grew much taller and were later; the cut worms destroyed the few others. For ten years I have tried to raise Cauliflower, but never before succeeded in getting more than a half dozen inferior ones. Mr. LANE, the party above referred to, gardens for pleasure rather than profit, and is very much delighted when he gets anything that is really good. He says he does not think there was ever a good Cauliflower raised in this town, and probably not in the county before.

He raised some of the largest and finest White Plume Celery from the seed I let him have that I ever saw grow. Persons from Michigan, where hundreds of acres are raised, said they never saw such fine flavored and tender plants. I was at a Christmas dinner where Celery raised by him was served; the stalks were fully eighteen inches long, not bigger than your finger and equally as round, and they would break off as clean as a pipe

stem. Not a rusty or dark spot from bottom to top could be seen; the plume a clean creamy white; good nutty flavor. He says it is the best kind of White Plume Celery he ever raised.

R. S., Milford, Ill.

A FEW NOTES ON BULBS.

It is not generally known that the common White Lily, *Lilium candidum*, must be planted in August or they will not bloom the next season. The reason is, they form the new bulb in the fall, and if not removed in time to do so, cannot bloom. They do well if left undisturbed for several years, merely renewing the soil and removing all weeds, &c.

Tulip beds fail if left several years without lifting, as the new bulb that is formed each season, unlike the Lily, is deposited beneath the old one, so that in time it is so deeply embedded that when the flower stem reaches the surface of the bed it is so weakened the bloom is small and imperfect. If lifted when the foliage is ripe, in July or August, well dried and cleaned from dead fibers, each bulb wrapped in soft paper and hung up in a wicker basket in an airy cellar, then replanted in October, they continue reliable bloomers.

Lilies should be planted deep, and for all the Japan varieties a little salt and lime are beneficial well mixed in the soil.

In planting all bulbs, place a layer of clear sand on which to set the bulb; this prevents rot before it can throw out spongioles or working roots. In moving or transplanting Lilies of this class care must be taken to preserve all the delicate tubers found above the bulb, each one should be planted separately, and will bloom in two years. The *Lilium candidum*, *longiflorum*, and *lancifolium* are easily forced if potted and plunged in a cellar till the pots are filled with roots, then brought to light and heat. The *L. candidum* does best plunged in the border and removed to shelter before severe frost, that the foliage may not be injured. All Holland bulbs, Hyacinths, Tulips, Crocus, Narcissus, &c., make beautiful border plants after forcing in the greenhouse or window one season, after resting them and planting out in September or October. In this way one may enjoy their loveliness and secure a desirable collection for bedding. Named varieties

give greater satisfaction if wished for window or greenhouse. Crocus are most beautiful if planted in clusters of three, five or seven all through the lawn. Lift the sod with a trowel and lay them underneath it, replacing all evenly. They will not interfere with mowing, as their foliage will have ripened before this operation is necessary.

Beds of the hardy Anemone with border of Alyssum saxatile or Bellis perennis are most beautiful, and easily cared for, merely requiring a layer of hay or evergreens, here in Kentucky, to prevent the tubers from being thrown to the surface by frost.

The California Lilies are now a success if planted very deep and well watered, and the old fashioned garden Flag has been brought to a state of perfection by cultivation, some varieties exquisitely lovely, especially the Iris Kaempferi.

IONE.

ANEMONE—ASTILBE—EULALIA.

Fifteen years ago I sent to Mr. VICK for a plant of Anemone Japonica alba, wholly on his recommendation of it, and I never bought a more satisfactory one, and I am surprised that it is not more generally cultivated. I have never seen one specimen of it beside my own or its offsets, for I have divided it many times. There is nothing lacking in flower or foliage, for beauty, and the larger a clump of it grows the better the blossoms are, that is, larger, and finally semi-double. They are so enduring, so pure white and velvety in substance, I am sure if once well known every flower lover would rejoice in the beauty of several large clumps. There is the A. rubra, too, which I have not yet, although I have sent for it at different times and places, and shall keep trying until I have it, as the Anemone and the Astilbe Japonica are great favorites with me. They are hardy enough to stand our winters out of doors, with slight protection, fine for house or veranda, and increase rapidly, and are most satisfactory in every way.

Another beautiful plant for the garden is Eulalia Japonica zebrina, and proving, after the trial of the severe winters in the past five years, to be all that is desirable in an ornamental grass, and the plumes in autumn are most graceful, and prove to be a fine addition to bouquets of dried

grasses, and, if preferred, for variety, color easily. No catalogue description or colored semblance of this plant that I have seen has ever done it justice, excepting the colored plate in this MAGAZINE a year or more ago, which was a correct delineation of the unique markings, feathery plumes and plant.

There are many new and beautiful plants introduced, and which can but take one's fancy, but many times when possessed, they prove a delusion by their inability to support the rigor of our winters, or by not fulfilling our expectations in any way; when, therefore, some kinds more than satisfy after years of trial, it is well to give them a good word of praise.

MRS. M. A. F., Fenton, Mich.

IMANTOPHYLLUM MINIATUM.

In the December number of your MAGAZINE, page 371, I notice the following statement by the writer of Floral Gossip: "Imantophyllum miniatum is a plant not very well known, I think, as I have never seen it in any other collection than my own." I have had two very fine specimens of this plant for a couple of years. They grow, as the writer referred to says, all the year round, and live under, or even in spite of, any kind of treatment. They are as fresh and healthy looking now as in the middle of summer, notwithstanding the extreme heat and dryness of the house. Mine bear five or six clusters each plant, and the smallest number of flowers in a cluster is five, while one cluster, last summer, on each plant had eighteen flowers. They bloom in April and last till June, nearly two months.

J. W. T., Montreal, Que.

CAULIFLOWER.

When making out my seed list last spring, I was informed that Cauliflower seed need not be bought as it was impossible to raise Cauliflower in the garden. But I persisted that we should try them, therefore I had Snowball, Clark's Champion an imported English variety, and Vick's new Ideal. The seed was sown in February, in boxes, and as soon as large enough to handle the plants were pricked into other boxes filled with loam and leaf-mold, after which they grew steadily along. The next move I gave them was into a cold-frame, six inches apart, each variety having the

same culture. I kept them in the frame until the 11th of April, when I transplanted them with a good ball of soil at their roots into a piece of land which had been thoroughly prepared for them, as the piece had been trenched or dug two feet deep, the subsoil brought to the top and well manured. The plants all went ahead splendidly, and by the 17th of June I had splendid Cauliflower on the table.

The difference between the varieties lay in Snowball and Vick's Ideal. Snowball I cut first, but the reason was that Snowball was open and fully exposed to the weather, whereas Vick's Ideal was covered as neatly as possible and would keep for a week or ten days, and make larger heads than Snowball, and white as snow.

Clark's Champion, though a little later, was a beautiful specimen, most of the heads in June weighing five and six pounds.

Those who have tried and not succeeded should try again. Trench a piece of land; it is worth your trouble. Later, I repeated the trial, having plants put out in June, with a more satisfactory victory for Vick's Ideal. It is hoped that those who, as gardeners, are trying to find out the best results, will not be afraid of expressing their candid opinion on this matter.

JOHN HUNTER, *Tivoli, N. Y.*

THIS, THAT, AND THE OTHER.

A correspondent at Easton, Mass., mentions a failure of some Roses in the house, for want of proper management, and remarks: "But I am not going to give it up because of this failure, as your witty correspondent, Mrs. SUSAN POWER, says in regard to making the English Ivy live out of doors through the winter, 'it has got to,' so some Roses have 'got to' live for me, sooner or later."

"I know, by the way, that the English Ivy has been made to live out of doors in this State, on the northeast side of the house, too.

"By the way, I would like to tell the lady who inquired so particularly about the Sweet Brier, in the October number of the MAGAZINE, that I once had a large, strong, healthy bush that I raised from the seed.

"I was much pleased and interested with the plate of wild flowers in the same issue, particularly Azalea nudiflora. I do not recollect ever to have seen that va-

riety growing anywhere in this section, although we have the white variety, A. viscosa, quite common here, and it is a great favorite of mine, not only for its beauty, but delightful fragrance, also.

"We have many beautiful wild flowers in this vicinity in their season; in May the Rhodora, which, I believe, is quite rare in many places; in June, several of our native Orchids, which are very lovely; in August, the true Ox-eye Daisy, which is often confounded with the White Daisy, or Marguerite, that pest and plague of the farmers hereabouts, but, I confess, a large field of it does look beautiful in full bloom, so pure and white, like snow."

In regard to these remarks, we would say that it should be well understood that a north or northeast exposure is the very best for the English Ivy; the damage to this plant in cold climates is not always due to the extreme cold, but oftener to the frequent and rapid changes of temperature of night and day, and especially when exposed to the full rays of the unclouded sun on bright winter days; hence, if shielded from all but the morning sun its dangers are lessened.

It would be more satisfactory if our correspondent would give the botanical name of the "true Ox-eye Daisy" referred to, and then it might be understood what plant is spoken of. The "pest and plague of the farmers" under this name is Leucanthemum vulgare, and any other Ox-eye Daisy is not generally known.

THE TREE PEDDLER.

The practising of "ways that are dark" by this industrious promoter of horticulture appears to afflict the people of Illinois. At the late annual meeting of the Illinois State Horticultural Society, a committee was appointed to secure appropriate legislation, if possible, controlling the sale of nursery products, in order to keep the tree peddler within the lines of "honesty and decency."

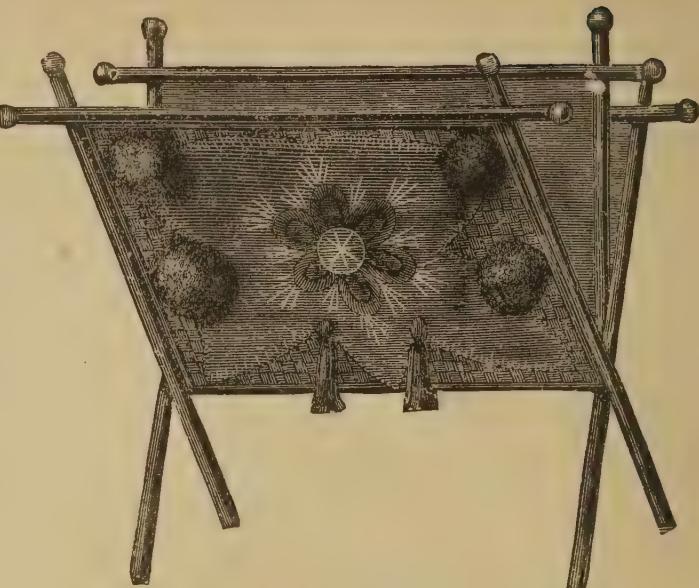
DESTROYING THE CODLIN MOTH.

The practice of spraying Apple orchards, just after the fruit has set, with Paris green or London purple, is coming more and more into favor, as it proves to be effectual for the destruction of the codlin moth, and with no injurious effects to fruit or trees.

HOLIDAY GIFTS IN PARIS.

Flowers and floral ornaments occupy the principal feature among the thousand of artistic creations for New Year's gifts. Christmas is hardly mentioned in Paris, and the eyes are rarely gladdened by the sight of the Christmas tree, as in Germany and in America. In France, more particularly in Paris, the floral offering for the New Year is always filled with natural flowers. A gift of flowers is considered the most desirable and acceptable present, leaving no obligation to the recipient.

An illustration is here presented of a receptacle for designs, engravings or large cards. It is home made, of dark, ruby colored velvet, known as the cranberry tint; the decorations are Thistles. The center ornament and tassels are of silver thread or cord. This is one of the many floral offerings found



RECEPTACLE FOR DESIGNS.



BASKET WITH FLOWERS AND BONBONS.



BOUQUET OF ROSES AND BONBONS.

among the collections of florists, and the store keeper hunts daily there for every novel creation in which to hide his bonbons. Who would have thought of finding bonbons in a little Willow basket, or a basket made of plaited reeds, in the top of which are Lilies of the Valley and Pinks, or Hyacinths and Tulips without roots, each stem with dampened moss, and the compartment in the basket, which divides the flowers, so arranged as to prevent dampness touching the bonbons.



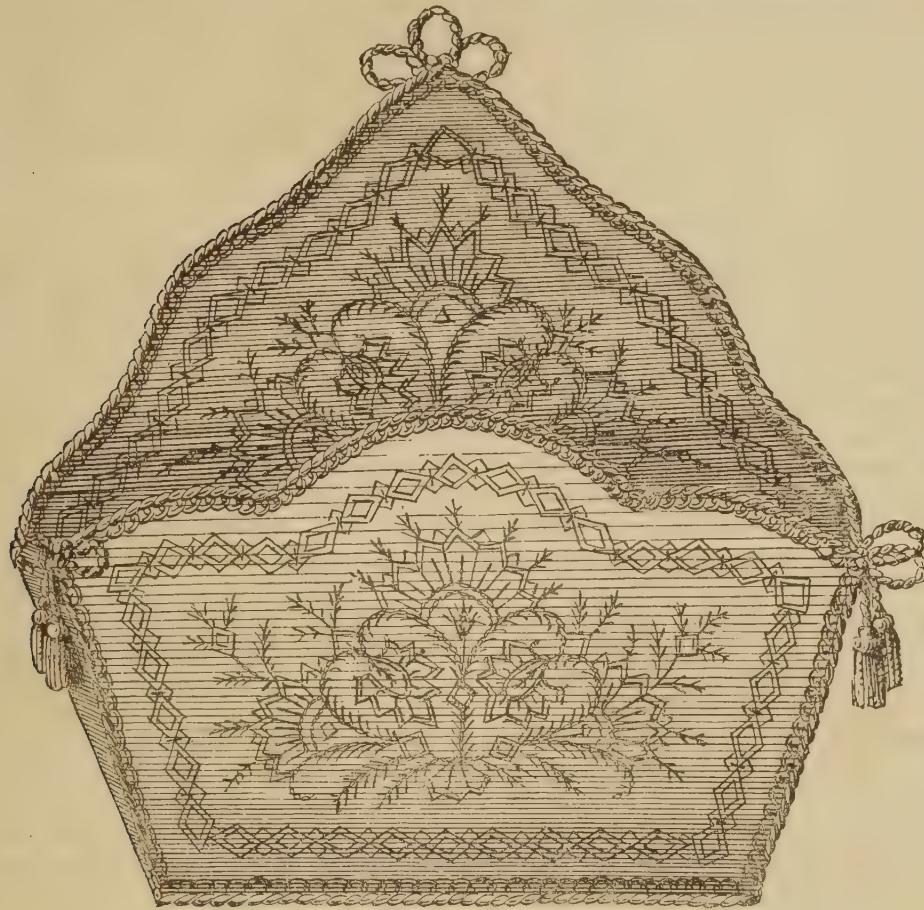
LITTLE RUSTIC WHEEL-BARROW WITH FLOWERS.

flowers and sweets.

A little cart is one of the objects frequently employed. It is made of wild grasses and reeds, filled with artificial Poppies and ornamented with ribbons, if the ornament be intended for a lasting joy; but if for a dinner table, or center table, the

wild green grasses and natural Hyacinths and Tulips blend well with the color of the bright hued satin ribbon, and are much preferable.

The day of cut flowers made in ordinary bouquets is passed, but the long-stemmed flowers, not run upon wire, but bound with wire carefully around slender sticks, first wound with fine damp moss are used for basket ornaments, and if carefully and lightly sprinkled daily will be a pleasing ornament for a week. Bouquets are used for parties, floral fans being too heavy. In my next I will give a bouquet holder, a French one, that the readers may note the difference between the German,



WALL ORNAMENT FOR DRIED FLOWERS, FERNS AND LEAVES.

American, and French paper bouquet holders. My desire is to show what objects can be used as home decoration and flower receptacles.

In America you have the esteemed colored autumn leaves, which trim well curtains, mantels, glasses and vases; and also the Pampas Grass, not much esteemed here, for the fact that flowers are not expensive, and are, therefore, more generally used. The pretty grasses are rendered hideous by being colored, and sold on street corners to be used in wine shops, but rarely ever reach the homes even of the poor. At the Louvre the Pampas Grass is sold with artificial vines and flowers so naturally made as to defy detection, and good prices they bring. Ribbon of the best quality, varying from two dollars even to four dollars the yard, are used upon floral ornaments, and give a desirable finish. Finger bowls, made to represent natural flowers, are much in vogue. What a place in every branch of art and manufactured goods flowers occupy! A well known designer of prints, said, "I owe my success to the faithful copying of flowers upon my designs."

A niche or corner ornament is made of old gold colored velvet ornamented with four shades of gold colored silk embroidery floss, made hastily; never work closely any article destined for flowers, but hunt crazy stitch patterns, those which will look effective. This is intended for dried flowers and leaves; being made of these gold

tints the autumn leaves and dried Ferns and flowers contrast well with the tints. Harps, spinning wheels, parasols, canes, little chairs, all ornamented with natural flowers, are among the newest styles of New Years tributes. ADA LOFTUS.

AN EXPERIMENT.

If there is anything that will tempt the amateur to try and forestall nature, it is to possess

"Valley Lilies whiter still
Than Lede's love,"

out of season. To possess anything out of season is a great incentive to effort; but these dainty bells, with their delicate perfume, more than all. Of course, the florists have given them to the public in quantities, and, last winter, at a comparatively moderate price, but the growing is so simple that any amateur may succeed with a little care, and have plenty of these for the sick, or to use on special occasions for home adornment. Bottom heat is the main thing, and may be supplied by the top of the warming oven of a kitchen range. The bulbs may be taken up any time before the ground becomes too hard, and should be planted in pots or boxes, according to the room at command or the quantity of blooms desired. Put plenty of drainage in the pots, charcoal or bits of broken tile, and fill with soil composed of wood soil, garden earth and compost in equal parts, adding about one-eighth sand. Get the roots from the florist or from the garden, if you have them, taking care to select those with good crowns; after planting properly, plunge in the border to remain until after a hard freeze, or more than one. Then bring to the house and water well, and set in any corner of the conservatory for a few days, when they are ready for forcing. The top of the warming oven of a Freeman range, or any other in which coal is used and fire kept during the night, is about the right temperature. But greatest care must be exercised to keep the pots plentifully supplied with tepid water; if this is done, in three days the grass and little weeds will shoot up as if by magic, and in five the Lilies will begin to grow, and in a week buds will be formed. It is then best to place them in the conservatory during the day, and when the blossoms are nearly open to keep them in a cool place.

Last year, in the incredibly short time

of three weeks, my experiment resulted in pots full of Lilies in perfect form, the leaves healthy and the blossoms as fragrant as if they had been gathered at the foot of the hedge in May. This bit of spring in early winter gives a great deal of pleasure for but little trouble. The same experiment was tried with the Japan Lily, *Lilium lancifolium rubrum*. It grew rapidly, but did not blossom until the first of May. Crocus and Tulips can be readily flowered in this manner, but Hyacinths* do not give perfect flowers.

A. M. P., *Waterville, N. Y.*

* This mode of forcing is too rapid for Hyacinths.—ED.

EUPATORIUM AGERATOIDES.

In the fall of 1885 a gentleman giving a large entertainment, requested me to fill for his table and parlor decoration some twenty-five large vases. At that season, November 22d, the glory of our gardens was waning, and, to accomplish my task, I felt compelled to cull from the abundant native flora. The roadsides and dingles were ablaze with several varieties of Golden-rods, Aster and, also, *Eupatorium ageratoides*. The last named struck me as indescribably lovely and desirable as an introduction into our cultivated plants, which thought nerved me to collecting a nice lot of roots, and now, after a year has elapsed, I feel fully repaid, as these same transplanted plants have yielded an abundance of exquisite white, feathery clusters, which give an ethereal grace to every bouquet culled, and invariably calls forth ejaculations of admiration, and questions, such as what is it, and where did you buy it; none recognizing it as one of our despised roadside weeds, as they are commonly called, but wishing eagerly to obtain plants for their own greenhouses.

Why is it that this *Eupatorium* is not more generally sold or cultivated? I have never yet seen it offered in any catalogue. It is nearly identical in size and shape with that of *Eupatorium arboreum*, with the advantage of preceding it in bloom full one month. It is lovely mingled in with Abutilons, Fuchsias, Cestrums and Tuberoses, which flowers I now have at this writing, December 13th, in abundance.

Mrs. J. S. R. T., *Spartanburg, S. C.*

PARIS DAISIES.

Such is the common name applied to the flowers of a species of Chrysanthemum, *C. frutescens*, the white flower shown in the colored plate this month, and a variety of it, the yellow flower, the French name of which is *Etoile d' Or*, or Golden Star. Another French name has become popular in speaking of both of these flowers, that of Marguerites, but such is the elasticity and inaccuracy of common names that the same term is applied also to the blue flower, which is neither a Daisy nor a Chrysanthemum, though the resemblance is very marked, but in botanical works is termed *Agathea cœlestis*. However, since a Rose by any other name would smell as sweet, we may as well admire the simple beauty of these flowers without questioning the popular terms. As cut flowers in a loose vase arrangement they do not fail of admirers. The plants of *C. frutescens*, the white variety, are robust in growth, making, in pot culture, strong, branching forms two feet in height and eighteen inches in diameter. It blooms profusely during winter, and is an excellent decorative plant for the greenhouse or window garden. The yellow variety, *Etoile d' Or*, is of similar habit, though not quite so strong in growth; the flowers are not so large as the white ones, though larger than shown in the plate, on good vigorous plants. *Agathea cœlestis* is a smaller plant, growing only from six to ten inches in height, branching, and bearing freely its blue flowers during the winter months. These plants also bloom freely during the summer months when planted out in the open ground. All are increased by cuttings.

VICK'S EARLY WATERMELON.

In the spring of 1884 I purchased a packet of seeds of this melon, and have intended to give a history of the success I had with them, long before this, but it is just as good now as before, as a true record was kept. Eight hills were planted the last of May, and when they came up they looked so healthy and nice that I thought I must have four more hills, making twelve in all. The plants grew vigorously, and were watched with no small delight, as the Watermelon is a great favorite, and it is always a pleasure to look at them any time when growing.

I consider them one of the healthiest of our garden products, and when the family is supplied with plenty of melons we never drink any liquids. When the vines were in full bloom and some melons had formed, of the size of an egg or a cup, a severe drouth swept over the country, and I feared for the melons, but thought I would try an experiment, for if it proved fatal it would be no worse than if they were let alone. So I drew water from a well that was near, and taking it in a watering pot, sprinkled the plants for two days in succession to keep them from burning in the hot air and earth; and then the long wished for rain came, and, O, how the leaves glistened and grew under the refreshing showers, and the little melons grew rapidly; standing in one spot upwards of eighty melons could be counted on those twelve hills. Now, I knew that so many could never mature, but thought it best to let them take care of themselves.

On the 19th day of August I commenced to gather, and such sweet and delicious melons I never had before, and never had any ripen before the last of September, and even as late as that was glad to have them. There were upwards of forty good sized, ripe melons; the others were of smaller size and not so nice and sweet, yet a good many of them were palatable, and I was satisfied that Vick's Early Watermelon is far ahead of any other for family use, and especially where the climate is cold and the season short.

Now, if a Muskmelon could be had that would rank with Vick's Early Watermelon, I should be pleased to see it, as melons are far preferable to tea, coffee or preserves to set on the table to eat with any meal.

D. S. T., Brockton, Mass.

JAMES VICK STRAWBERRY.

A correspondent at Manchester, N. H., writes as follows: "Last season I had a patch of the James Vick Strawberry, fourteen by twenty feet, from which I picked fifty-six quarts, not boxes, and which, I think, is a very good crop. The plants had no extra care." This is at the rate of eight thousand seven hundred quarts, or two hundred and seventy bushels, to the acre. Who has done better with any variety?

NOTES.

I have used the sulphide of potassium for mildew the past two seasons, and am well pleased with it. It is cheap, easy to prepare and ready for use at all times. It does not coat the foliage of Roses as much as the mixture of sulphur and lime recommended by one of the florists at Cincinnati, last year. Wherever steam is used, I think a better preventive is to dust sulphur on the pipes about twice a week. When the steam guage marks about four pounds, I dust the pipes with sulphur until the air is quite blue from the fumes. In my opinion mildew and red spider will never become troublesome when this is regularly attended to during the entire winter.

Out of a collection of over fifty varieties of Chrysanthemums, the flowers of Madame Planchenau, La Nymphe and Golden Dragon out-sold all others. The flowers were mostly sold for corsage purposes. Christmas Eve, a variety lately introduced with enticing cuts and glowing descriptions, gave us a few fine flowers late. From one season's experience I should think it a shy bloomer, and will be chiefly valuable to the florist who desires some late flowers. Loose flowers with long stems seem to be superseding all kinds of made-up work. A few of the Japanese Chrysanthemums, with choice Roses, make a very pretty assortment for a box of loose flowers. LEVANT COLE.

LEPTOSYNE MARITIMA.

A writer in the last number of the *American Florist*, describing the cut flower trade in Philadelphia, says: "The Leptosyne maritima, a large, yellow, Daisy-like flower, came in very useful at this season. It must be closely allied to

the Dahlia, for it has been placed in that genus by an eminent botanist. Who can give the history of this flower? It would prove interesting."

Though a history of this plant cannot here be given, it may be said that, on the authority of Dr. GRAY, it is an inhabitant of the sea coast of California at San Diego and the adjacent islands. It is a perennial in its native locality, though classed by seedsmen as an annual—probably because the seedlings bloom the first year. The plant grows ten or twelve inches in height, has fleshy leaves bipinnately divided into narrowly linear lobes of a line or two in width; the rays of the flower are sixteen to twenty, an inch or more long, obscurely toothed at the apex, and the disk is commonly an inch in diameter. Both disk and ray flowers are bright yellow. The flower stems are six to eight inches long, and the flowers, or flower head, four inches or more in diameter. It can be raised and bloomed in the garden as an annual, or used for forcing by sowing seeds in September, and potting and growing.

APPLES FOR THE NORTHWEST.

PETER M. GIDEON, Superintendent of the Minnesota Experimental Fruit Farm, has obtained more than twenty valuable varieties of Apples that are considered hardy in the Northwest, standing the severest cold, and bearing when both the Duchess and the Wealthy have been injured. These varieties are the result of cross fertilizing the Siberian Crab with good varieties of the common Apple. He has thousands of seedlings with the same parentage that have not fruited, and expects in time a great variety of hardy, good Apples for all seasons.



OUR YOUNG PEOPLE.

FIRESIDE GHOSTS.

IN TWO CHAPTERS.—CHAPTER II.

"You'll not forget, grandmamma," said Clarence, "that you told us your ghost stories might not prove very satisfactory, with *one exception*. We shall want to hear that one, sure."

"Certainly, but that must come later on. Now that you have sent my memory rummaging back into the old times for your entertainment, many incidents are recalled, some of which you may like to hear. Once, when visiting my paternal grandmother, ——."

"Oh, how delightful!" interrupted Kathleen, "for *our* grandmother to be telling us of *her* grandmother!"

— when visiting her once, she told me of the charming young quakeress who had refused to marry one Jonathan Meigs, a lawyer, because of her parents' opposition to his 'unhallowed profession,' they believing that all differences should be settled by churchly arbitration. And, Clarence, remember that lawyers may decline to plead the cases of those whom they know to be in the wrong, and, if so disposed, may generally secure an amicable settlement. The late Justice Swayne, of Ohio, was a lawyer of this class, and the symmetry of his life is a living tribute to the efficacy of his early training.

"But Jonathan Meigs was a worthy young man, despite his profession, and the parting had been a tearful one. As he rode away on horseback, the maiden mentally besought divine guidance, and vowed that if he turned to look back at her she would recall him. Sure enough, he turned on his horse to wave a last adieu, and she cheerily called out, 'Return, Jonathan.' This incident was commemorated in the naming of their eldest son, who lived to become an honored public man—Return Jonathan Meigs having been one of the early Governors of Ohio, also, at one time, Post Master General of the United States. The relation of this incident reminded my grandmother of an experience of her own.

"My grandfather was the oldest child of Puritan parents, whose Sabbaths, like those of their Mayflower ancestors, began and ended with the going down of the sun on Saturdays and Sundays. When the skies were cloudy a careful consultation of the almanac decided the exact moment when his mother's knitting was to be put away or to be resumed."

"Just listen!" murmured Kathleen; "it is her great-grandmother she's telling us of now—our great, *great* grandmother!—well?"

"Grandfather used to say that when his mother thought there must be some hot drink with their cold weather Sunday meals, which were cooked the day before, she would hang the tea-kettle on the crane and lift it off again without laying down her Bible.

"When her son joined the followers of George Fox, 'from conviction,' as did William Penn, he said it nearly broke her heart. It seems that soon afterwards he sought favor in grandmother's eyes, who was then but seventeen years old. But she still considered him an alien, and being positively afraid of his mother, gave him the cold shoulder. But not a whit discouraged, he quietly persisted in visiting the family and making himself generally agreeable.

"On one of these occasions he inquired of her the name of the Golden Russets that were being passed round. She knew he was perfectly familiar with the Apple, and quickly answered: 'Seek-no-further.' This being the name of a very different Apple, her meaning was obvious. But its only effect upon him was to increase his admiration, as he afterward reported."

"Well, how in the mischief did he ever win her?" interposed Clarence.

"I thought," said grandmother, "you'd be so lost in the admiration of the wit and the pluck of your ancestors that you'd lose sight of that point."

"Not at all. I'd like to know what's left for a fellow to do when he's snapped off like that."

"If the lassie be as young as grandmother was, and your 'fellow' as matured and cool-headed as in the other case, he can bide his time until she find she had not known her own mind as well as she fancied."

"Tell us more about our great grandmother, please," said Kathleen, "did she not believe in ghosts?"

"No, though such belief was common in those days. She said ghosts existed only in fireside tales. But I think she half believed in premonitions, or 'fore-runners,' though the most current ones, so called, were too absurd for intelligent notice."

"In many communities there was a sign, or 'warning,' for every event in life, whether grave or trifling. If the dog howled, if the cat had a fit, if a dropped fork stuck upright in the floor, if the candle sputtered, if your nose itched, if your chair upset, if the salt were spilled, if there were a hollow in the bread-loaf, if a mirror were broken, or if any one of a score of other trivial things occurred, then somebody was coming, or something was going to happen."

"My grandmother seemed very much troubled once, when a small looking glass was broken, saying it was the sign of a death in the family. I had already heard this from Jane and her associates, but having discarded all their chatter in supreme disgust, I was somewhat shaken to hear it repeated by my grandmother. After the funeral of a favorite grandchild, several months afterwards, I heard her refer to the broken mirror and to her feelings at the time."

"But the rebound in my feelings after Jane's course of dulling was still effective, and knowing that with my temperament a belief in such things would make me wretchedly apprehensive, I reasoned, even at that age, satisfactorily to myself, in this wise: 'Children are always dying as well as grown people; both classes would continue to die if mirrors were never broken, and mirrors would be accidentally broken if nobody ever died.' So you see, my dears, if common sense be applied as a test to such vagaries, they vanish."

"When I, myself, was having my wedding outfit made, a mirror was broken while I stood before it examining the fit of my bridal dress. Instantly I said to

myself: 'An old-time dame would predict that my wedding robe is to be my shroud.' Nothing could have given more point to the alleged omen than that it should have occurred just then. Yet the loss of the mirror proved to be all the wo there was connected with the mishap."

"Many like reminiscences I could relate, but will pass on to the time when I found myself a happy guest in the home of a dear friend of my mother's—a widow with five sons—the youngest nearly grown. She had long claimed me for a visit, because she was fond of girls and had no daughter—or so I fancied. A young nephew of hers, introduced as Paul, met me very cordially, and while being conducted to my room, I decided we should be very good friends. When I had hung my simple dresses in the spacious wardrobe assigned to my use, I pinned a bright ribbon bow (which my mother had never seen) to the neck of my dress for Paul's special benefit, and went down supremely satisfied."

"Shortly after I was thrown into a fit of merriment by his privately sounding the cast of my phraseology after this fashion:

"Do thy say *you* to thee mother?"
(Meaning, Does thee say you to thy mother?)

"It was evident that he was not familiar with the bible dialect of the 'Friends,' if such it can be called, when so grammatically distorted. But so gallant an advance toward adapting himself to my suspected peculiarities was not lost upon me, and I apologized for my rudeness, but spoiled it by ending up with another laugh, in which he joined so heartily as to establish his good nature and jollity. Through him I learned that by the recent death of his aunt's-mother-in-law—the last of her family—the present inmates were new occupants of the fine old rambling mansion."

"At meal time the eldest son did the carving and serving, and a white-aproned mulatto boy was table waiter. At both dinner and tea he carried the first plate, well filled, to the kitchen—to the cook, I imagined—and recalled what I had heard of this household—that it was ruled by love and kindness."

"That night I went to my pleasant room with head full of happy anticipa-

tions. I closed and locked my door, and set my sperm oil lamp on the dresser at one side of the large, tilting mirror. Glancing into it a moment after, I was horrified to see a hideous-looking something, with head and figure enveloped in white, peering and grinning at me through a space in my wardrobe door. I was so paralyzed with fear that I could not turn around to confirm what I saw, but stood with eyes fixed on the apparition before me.

"A flashing thought suggested that it was grinning its horrid grins at my ribbon-gaiety, and that this was my punishment. The next instant I fancied that the door was opening a little wider, and the thing emerging. Feeling utterly helpless, the strain was too great, and once again I screamed and fell fainting to the floor.

"The startling sounds were heard, and some one burst open the door to find only a limp little girl who could explain nothing. When consciousness returned I was obliged to confess that I only saw what was in the mirror—did not even look at the wardrobe itself—and though this confession confirmed their belief that I was laboring under the effects of an illusion, I knew to a certainty that my very eyes had seen the mirror's reflection of an actual object, whether supernatural or not I could not decide. My kind hostess had no word of reproach, but had me tenderly carried to her own bed, no doubt greatly troubled by so sad a beginning to my visit.

"The next morning I declined breakfast, feeling too wretched, too disgraced to meet the family. But Paul's breakfast and mine were brought in on a little table, which was very comforting. As soon as we were left to ourselves, he whispered:

"' Didn't that spook, you saw last night, just grin and grin perfectly horrid?'

"I nodded assent, in amaze.

"' I knew it did; I've seen it! ' he whispered, excitedly. 'One day, when I was having a romp with the dog, it grinned down at us from the attic window.'

"' In the *day time*? Then it is no spook,' I retorted, quite relieved.

"' Yes, it is,' he said; ' You see this is an old, old house, and it's haunted. The ghosts get bold when they've lived in a house so long.'

"' How wise you are,' I said. "Was your spook all wrapped up in white?"

"' No, of course not. They don't put on their white toggery till night.'

"' Indeed! You know so much, probably you can tell what the thing was grinning about.'

"' I suppose it enjoyed seeing Vic and me race and tumble around.'

"' And what was it grinning at me for, last night?'

"' Because you're so pretty.'

"' Nonsense. I'm going home, to-day. No one believes I saw anything, and I'm perfectly disgraced.'

"' I believe you saw something—the same that I did.'

"' But stop and think,' I said. ' Nothing was found in the wardrobe, and there was no other door for escape. That's what torments me.'

"' Sure enough,' he answered, and fell to pondering and stirring his untasted coffee."

At this point Clarence and Kathleen demanded an explanation—they could wait no longer. But grandmama gave no heed.

"' Directly,' she continued, "he looked up."

"' If you will stay,' he said, ' I'll get cousin Carlos to sleep in that room tonight, and see what will come of it.'

"' I might stay one more night, I suppose,' I reluctantly admitted, seeing no possible solution of the mystery, for how could I ever have faith in genuine ghosts since Jane's cruel maneuvering?

The result was that the eldest son was to occupy that room—merely to keep me with them one more day—he told Paul in confidence. But he had not been in the room more than five minutes until he saw the same sight that I did, and, when he sprang towards it, it dropped to the floor and disappeared through an opening under a shelf into an adjoining wardrobe and fled."

"' What was it? ' "What was it?" asked Kathleen and Clarence, in a breath.

"' My dears, it was an imbecile sister of Carlos' very own. She had always lived in that house, and been cared for by the noble grandmother, who would not consent that the child's mother—not her own daughter, but a daughter-in-law—should have the prime and flower of her life overshadowed and blighted by so depressing a care and burden.'

"It was found that many years before, during a long illness in that particular room, that the opening with a sliding door had been made for passing through trays and slops, from whence they were easily removed by way of the back stairs, and thus that poor creature knew of it.

"The only developed instinct of her almost blank existence was a perfect mania of admiration for children. Hence, when she heard their voices she was wild to see them and to get near them. This ex-

plained her appearance to Paul and myself."

"It was pitiful," said Kathleen, "and how lovely of Carlos to always remember her at table; and O, how—how *beautiful* it was of that woman to assume the care of the poor creature!"

"Yes," echoed Clarence, "beautiful and *grand*—that's what it was! And, grandmamma, you've never believed in ghosts since then, for sure."

"Never, for sure." MARIA B. BUTLER.

BEAVERS.

In many parts of the world these busy little creatures live, and are noted for their industry and skill in constructing their homes, which are always on the water's edge and near some thickly wooded region, for they need more than straw, leaves or



twigs, which serve for little bird's nests, in their buildings, which consist of several rooms under one roof. The interior of the structure is about seven or eight feet in diameter and three feet high. Around this, but leaving a vacant space or court in the middle, several rooms or apartments are arranged. The walls are built of the

branches of trees, chiefly those from which they have stripped the bark, and this bark is stored away for their winter food. The branches or logs are then laced together with twigs, and the spaces plastered with mud, the walls inclining toward each other at the top. The roof is of branches and moss, all securely massed together, also, with mud. Thus the structure is both warm and strong, and the little builders are safely protected from the attacks of fierce animals.

If the water is not sufficiently deep in front of their dwellings to store their winter supply of food, which consists principally of the bark of trees—a depth of about ten feet is required to protect it from the ice—they will dig away the mud and build across the stream a dam to hold the water back, and thus give the depth they wish. Beavers have, besides their lodges or apartments, what might be called dining-halls, for they do not eat in the same building in which they sleep, but make for themselves burrows or rooms where they take their food.

The beaver is about two feet in length, has a broad, somewhat flattened tail, the

two hind feet are long and webbed, the fore feet are short and not webbed. The hind feet are used for swimming, while the fore feet are held closely to the side, but when the beaver is building its lodge or dam the fore feet are used as arms with which to carry the logs and branches.

The strong teeth are the little workman's tools with which he cuts down the trees, and right skillfully the work is done. The teeth have a hard yellow enamel on the outside, but the under part is softer and more easily worn away. The tooth is, therefore, kept with a chisel-like edge, well sharpened for cutting, and thus the beaver's tools are ready for use at any time.

In summer they love to eat berries of various kinds and the roots of the Water Lily, but in winter their diet consists of bark.

They have always been noted for the dams which they build over streams, some of them measuring many feet in length. They are hunted and caught in nets or traps for the sake of procuring their beautiful furs, which are of great value.

M. E. WHITTEMORE.

EDITOR'S MISCELLANY.

NEW VARIETIES OF ROSES.

Descriptions were given, in last month's issue, of the new varieties of Hybrid Perpetual Roses now being offered for the first time by the French growers, and below will be found, somewhat abridged from the original, those of the new varieties of the other classes, from the same source. The name of the originator follows the name of the variety.

TEA ROSES.

Archiduchesse Marie Immaculée, (Soupert et Notting); flowers large, full, well formed; clear brick color shaded with shining chamois, center golden vermilion.

Baronne de Fonvielle, (Gonod); a very free bloomer; flowers large, full, finely formed; color a coppery yellow, the exterior of the petals a lake red; very fragrant.

Château des Bergeries, (Ledechaux); flowers large, very full, globular; color a pale canary yellow with a deeper center; the bud is large and of fine form, constituting it a good variety for cutting. Received a silver medal last year.

Directeur Bernard, (Soupert et Notting); a free bloomer; flowers large, full, imbricated petals; color a very soft magenta red on a silvery surface.

Docteur Grill, (Bonnaire); flowers large, full; color coppery in opening, with lighter tints and shaded with clear rose.

Duchesse de Bragance, (Dubreuil); flowers large, very full; color bright canary yellow at the center, paler at the edges of the petals. It is unfortunate that this variety and a Hybrid Perpetual, described last month, should be named alike.

Lady Stanley, (Nabonnand); flowers very large and full, globular; color lilac on a yellow foundation, edges of the petals purple.

Lady Zoé Brougham, (Nabonnand); flowers large, full, imbricated; color brilliant chamois yellow, deeper at the edges of the petals.

Luciole, (Guillot et fils); buds long; flowers large, full, finely formed; color very bright carmine rose tinted with saffron yellow on a coppery foundation, exterior bronze; very fragrant.

Madame Agathe Nabonnand, (Nabonnand); plant very vigorous, continually flowering; splendid, large, oval pointed bud; flowers very large, full; flesh color; very fragrant.

Madame Chauvry, (Bonnaire); sarmentous or climbing; a free bloomer; flowers very large, full, concave in form; color nankin yellow shaded with rose, exterior of petals coppery.

Madame Dellespaul, (Veuve Schwartz); flowers large, full, finely formed; color yellowish white with salmon rose center.

Madame Etienne, (Bernaix); long pointed bud; flowers large, full, cup-formed, with large petals; color deep rose, passing to a paler rose down to a pure white at the center. Received a silver medal in 1885.

Madame Honoré Defresne, (Levet Claude); flowers large, full, finely formed; color a beautiful yellow with coppery shades.

Madame Marguerite Large, (Nabonnand); flowers very large, full, of flat form; color unique rose.

Madame Scipion Cochet, (Bernaix); flowers very double, petals of the exterior ranks regularly concave, imbricated; color very pale rose, clouded with

dead white on a clear yellow foundation, central petals more irregularly placed, and of an apricot canary yellow. Received silver medal in 1885.

Mademoiselle Claudine Perreau, (Lambert); derived from Souvenir d'un Ami, more vigorous; flowers of medium size, full; color very bright red, sometimes lighter.

Mademoiselle Elisabeth de Gramont, (Levet Claude); bushy, with large, short, erect wood, almost thornless, very free blooming; flowers large, very full, of perfect form; color beautiful bright rose, with the base of the petals a yellowish coppery tint. Received a grand silver medal in 1886.

Marie Lambert, (Lambert); derived from Madame Bravy, and inherits all the vigor of that variety; flowers of medium size, full; pure white.

Président Constant, (Nabonnand); long pointed bud; flowers large, full; color soft rose shaded with copper, foundation brilliant golden yellow, edges of petals bright red.

Princesse de Hohenzollern, (Nabonnaud); flowers very large, perfect form; color a brilliant red with a lighter center.

Princesse de Radziwill, (Nabonnand); flowers very large, full; color a clouded coppery red; the bud is conical and pointed.

Vicomtesse de Wautier, (Bernaix); long bud; flowers large, full; color bright rose tinted yellow at the exterior, and rosy white at the interior.

Vicomtesse Dulong de Rosay, (Nabonnand); almost thornless; flowers large, full; color very bright red, with the edges of the petals silvery.

HYBRID TEA ROSES.

Attraction, (Dubreuil); flowers medium size, full, well formed; color a clear carmine shaded with deep rose, with a lighter bloom; petals yellowish at the base.

Madame Joseph Desbois, (Guillot et fils); flowers very large, very double and finely formed; flesh color, with very soft salmony rose center. A cross of Baron Ad. de Rothschild and Madame Falcot.

Madame Schwaller, (Bernaix); bushy plant, blooming in clusters of three or four erect flowers, which are globular in opening, but become cup-formed; petals curled and twisted; flesh color at the center, shading lighter at the edges.

BENGAL ROSE.

Nabonnand, (Nabonnand); plant very vigorous; flowers large, full, imbricated; color velvety purplish red, shaded with yellowish copper.

BOURBON ROSES.

Gloire d' Olivet, (Vigneron); flowers large, full, globular; very soft lilac flesh color.

Madame Chevallier, (Pernet père); flowers large, nearly full; color a beautiful bright rose; blooms continually and abundantly.

LITERARY NOTICES.

The January number of the *New Princeton Review* came filled with excellent articles by able writers. Two of them which specially interested us are the Past and the Future of the Irish Question, by James Bryce, M. P., and the Extirpation of Criminals, by Charles Dudley Warner. Victor Hugo, by John Safford Fiske, which is commenced, but not finished in this number, is apparently a just and scholarly criticism of the literature and literary ability of the great French writer. The whole number is filled with excellent matter. This *Review* is pub-

lished by A. C. Armstrong & Son, of New York, at \$3.00 a year.

The second volume of *Perley's Reminiscences* has been received, and proves to be as racy and interesting as the first one. The whole forms a wonderful collection of facts of a personal nature, relating to the distinguished personages both in society and in national affairs in this country during the last sixty years. The accounts are brought down to the wedding of President Cleveland. The style of writing is graceful and easy, and the interest is sustained throughout by vivid descriptions, well told anecdotes, reports of conversations, and the relation of facts of a personal nature that are often the key notes to characters. Hubbard Brothers, of Philadelphia, are the publishers.

The *Popular Science Monthly* gives its readers monthly the cream of the popularly written scientific articles of Europe and this country. We know of no means so helpful to keep one abreast of the scientific thought and progress of the times as the monthly perusal of this magazine. Even the general reader, who gives no special attention to science in any branch, can read it with interest and profit. The greatest variety of subjects are treated upon, many of them relating to health, personal comfort, education, and the practical affairs of life, and its monthly issues should have the widest circulation. The subscription price is five dollars a year; published by D. Appleton & Co., New York.

A Report on the Fungus Diseases of the Grape vine, by F. Lamson Scribner, B. S., appears as bulletin number eleven of the Department of Agriculture. It is illustrated with well executed engravings and colored plates. The subjects are treated carefully and fully, and give the best and latest information on these diseases of the vine, and their remedies and preventions; these are, the downy mildew, the powdery mildew, the black rot, anthracnose, Grape-leaf blight and Grape-leaf spot. The publication of this work will undoubtedly prove a great benefit to the Grape-growers of this country, and credit for it must be given to the Department of Agriculture.

The first or January number of the new *Scribner's Monthly* made its appearance with the new year, and it promises to be a literary periodical of the highest ability. The first article, by Ex-minister Washburne, detailing the scenes of which he was an eye witness in Paris, of the fall of the last French empire and the establishment of the republic, are so vivid and real that the reader seems as if he, himself, were on the ground and saw and heard all that transpired in connection with the wonderful events of that time. The magazine is filled with articles of excellence, and the comparatively low price of \$3.00, with the high standing and energy of its publishers, Charles Scribner's Sons, of New York, will insure its popularity and extensive circulation.

A PROPHECY.

The enthusiastic nurseryman and publisher of *Orchard and Garden*, J. T. Lovett, appears to be willing to risk his reputation for sagacity on a horticultural forecast. In his last issue, he says: "The signs of the times, so far as horticulture is concerned, seem to us most favorable, and we will venture a prediction—this prediction, that the last year of the present period of depression in horticultural products was ended on December 31st, 1886." Often the wish is father to the thought, but perhaps there is a better parentage in this case. We certainly hope the prediction may be abundantly fulfilled, though we own ourselves to be weak in the faith.